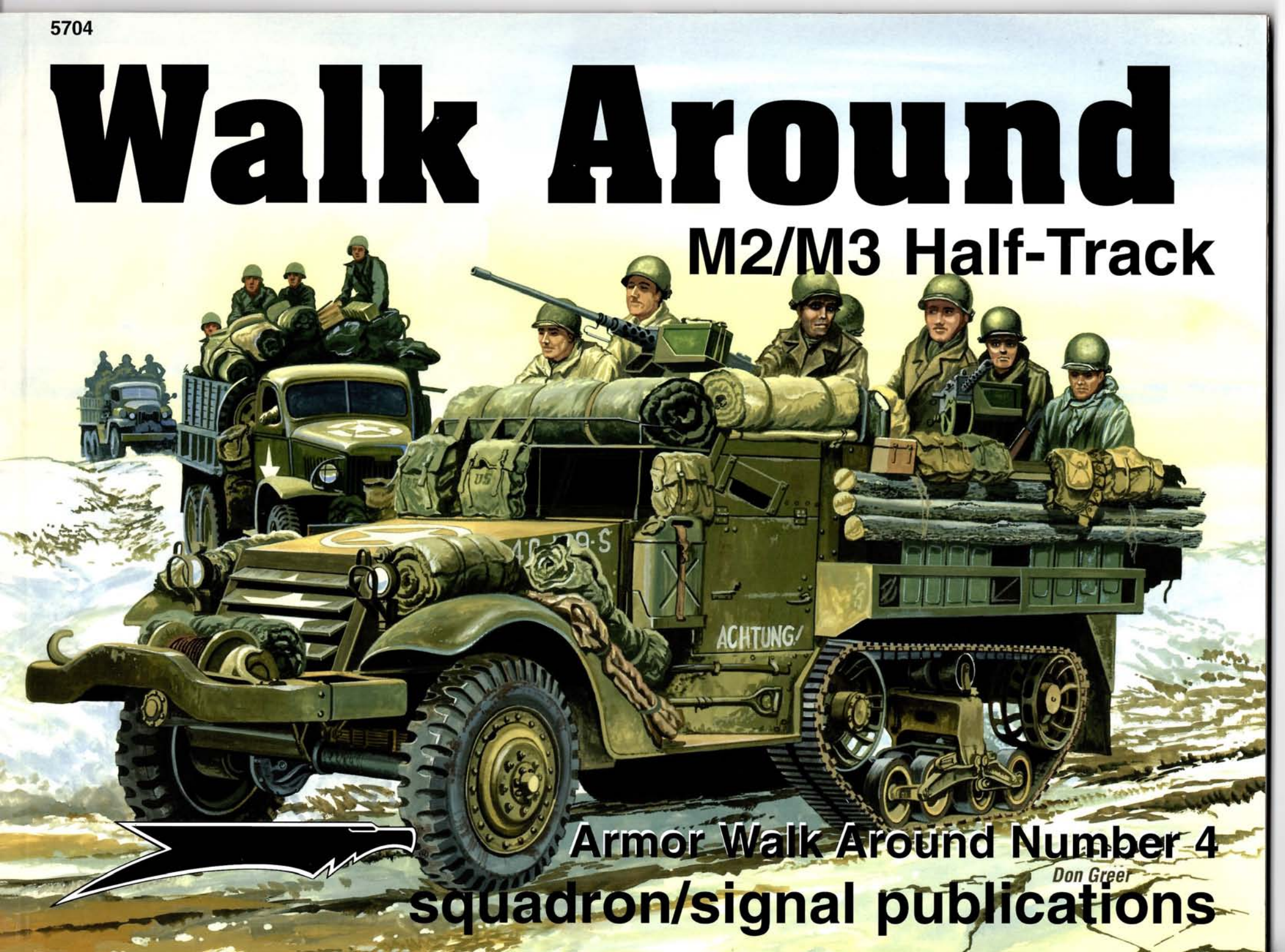
5704

Walk Around

M2/M3 Half-Track



Armor Walk Around Number 4

Don Greer

squadron/signal publications

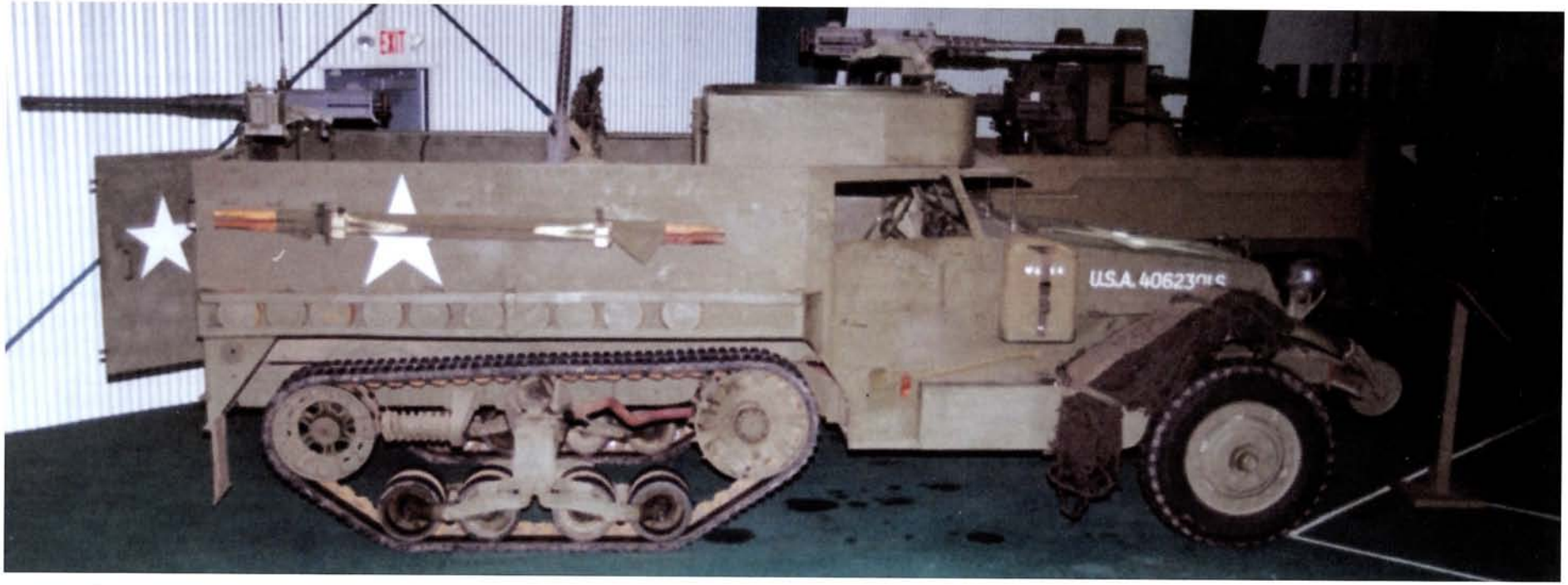
Walk Around

M2/M3 Half-Track

By Jim Mesko

Color by Don Greer and David Gebhardt

Illustrated by Darren Glenn



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Introduction

When the US Army decided to mechanize its infantry to support the new armored formations, it decided to utilize an armored half-track combination based on the M3A1 Scout Car. The half-track was chosen to ensure that the vehicle could keep pace with tanks during bad weather and cross-country movement. Trucks had limited mobility and protection. The M3A1 was fitted with a tracked suspension and designated the **T7**. Underpowered, a more powerful engine was substituted, with the new designation **T14**. This proved acceptable and received the designation **Half-Track Car M2**. A version with a slightly longer body for use as an infantry carrier was designated the **Half-Track Personnel Carrier M3**.

These two versions served as the basis for nearly two dozen variants. The demand for half-tracks became so great that the three firms originally involved in their production – Autocar, White Motor, and Diamond T Motor – could not keep up with the demand. This resulted in a contract being given to International Harvester to produce similar vehicles under the designation **M9** and **M5**, these corresponding to the M2 and M3. The main external differences between the versions were the rounded fenders and squared off rear corners of the M2/M3 as compared to the flat fenders and rounded rear corners on the M9/M5. The M9 also did not feature the shortened body of the M2. There were also numerous internal differences in terms of equipment and type of armor used.

The primary sub-variants that saw widespread service were the **M4** series mortar carrier and the **M13/M16** anti-aircraft version and its derivations on the International Harvester chassis. There were also several self-propelled gun and artillery versions based on the half-track chassis but these were only produced in relatively small numbers and many were converted back to the half-track configuration.

These half-tracks saw extensive service on every front throughout World War Two. They were supplied by the United States under Lend-Lease to many of our allies during the war. The majority of those supplied under Lend-Lease were the International Harvester models. Following the war, the M2/M3 series continued to serve in numerous armed forces and conflicts around the world, including Korea and Indochina and later Vietnam. The vehicle's largest user was the Israeli Defense Force, which began acquiring many of them in the late 1940s. Eventually, Israel fielded several thousand vehicles as Armored Personnel Carriers (APCs) after an extensive modification program. These saw service in the 1956, 1967, and 1973 conflicts, and eventually were re-engined with diesel powerplants in the mid-1970s. Reserve units used these vehicles until their final withdrawal from service in the early 1990s. That's not a bad record for a vehicle first produced in 1940.

Acknowledgements

This book would not have been possible without the help of the following people and museums. Henry Venetta, Owner/Curator, Joe Plaisted, Assistant Curator, and all the staff at the World War Two Vehicle Museum and Learning Center in Hubbard, Ohio who gave freely of their time and information and allowed me total access to their display vehicles. Without their help and patience this book would not have been possible. Mike Green photographed Jacque Littlefield's collection and Mike was always willing to send photos of specific material on a moment's notice. The Patton Armor Museum at Fort Knox, Kentucky and its staff have provided outstanding assistance over the years with their photo collection and access to their library files and vehicles. Richard Hunnicutt constantly provided help from his extensive photo collection and outstanding narratives on American armor over the years. He is without a doubt a fine gentleman and an outstanding scholar who has provided this author with fantastic support over all these years. A special word of thanks goes to my best friend, Duane Ward, who took many of the fine photos seen in this book. Over the years he has come to know more about the world of armor then a dedicated airplane fanatic would ever have thought possible. The photos that grace these pages are the result of a lot of field trips and contortion acts that he never anticipated when we first met so long ago. And finally to my lovely wife Pat, who provided computer support and puts up with my obsession for all things military. Without her, I'd still be using paper and pencil. To all of these wonderful people – THANK YOU SO MUCH!

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Dedication:

This book is humbly dedicated to the memories of Corporal John Martin, 35th Tank Battalion; 4th Armored Division, and Corporal Joe Martin, 323rd Field Artillery Battalion, 83rd Infantry Division, who gave their lives in the service of their country for the cause of freedom during World War Two.

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(Front Cover) ACHTUNG! was an M3A1 (U.S.A. W-404429-S) assigned to the 23rd Engineer Battalion, 3rd Armored Division at Dueren, Germany in February of 1945. Dueren served as a staging area for the VII Corps when it crossed the Roer River during Operation GRENADE late that month. The vehicle carries logs on its side for additional protection and to help extract it if it got bogged down in the mud.

(Previous Page) The M3 Half-track provided the mobility needed by American armored infantry units attached to armored divisions. This beautifully restored M3A1 is on display at the World War Two Vehicle Museum and Learning Center in Hubbard, Ohio.

(Back Cover) An M16 (U.S.A. W-4048604-S) from the 447th Anti-Aircraft Artillery (AAA) Battalion is stationed near Neufchateau, Belgium on New Year's Day, 1945. The vehicle was dug in and camouflaged with Black paint over its Olive Drab base coat. Additional storage racks for jerry cans were added to the front fender.

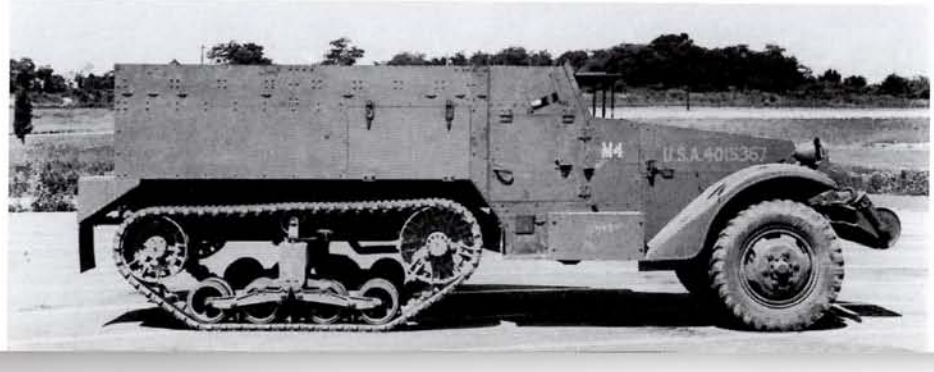
The M2 Half-Track Car was the initial development in the production half-track series. The main difference between it and the M3 was a shorter troop compartment and bins along both sides behind the driver's compartment. Additionally, the M2 featured a skate rail along the inside for machine gun mounts. (PAM)

The M3 Half-Track Personnel Carrier had a longer troop compartment and no bins along the side. This vehicle featured a pedestal mount for a machine gun in the troop compartment, instead of the M2's skate rail. (PAM)

Dissatisfaction with both the skate rail and the pedestal mount led to the development of the M49 Ring Mount. This gave the gunner a much better field of fire. The M49 was fitted to both the M2 and the M3 with the designation A1 added to the original designation, resulting in the M2A1 and M3A1 models. (Hunnicutt)

The M3 was also used to carry both Maxson M33 twin and M45 quad .50 caliber (12.7MM) self powered machine gun mounts. The twin mount in the half-track was designated the M13, while the quad mount received the designation M16. Sections of the side and rear folding armor flaps were cut out to allow the bottom gun magazines to traverse on the M16 when the guns were fired at low elevations. (PAM)

The M2 and M3 were also used as a chassis for an 81MM M1 mortar under the designations M4 (shown here) and M21, respectively. Aside from the body differences, the M4's mortar faced aft while the mortar on the M21 faced forward and also had 30° traverse to either side. The mortar is not mounted in this pilot vehicle. (Hunnicutt)

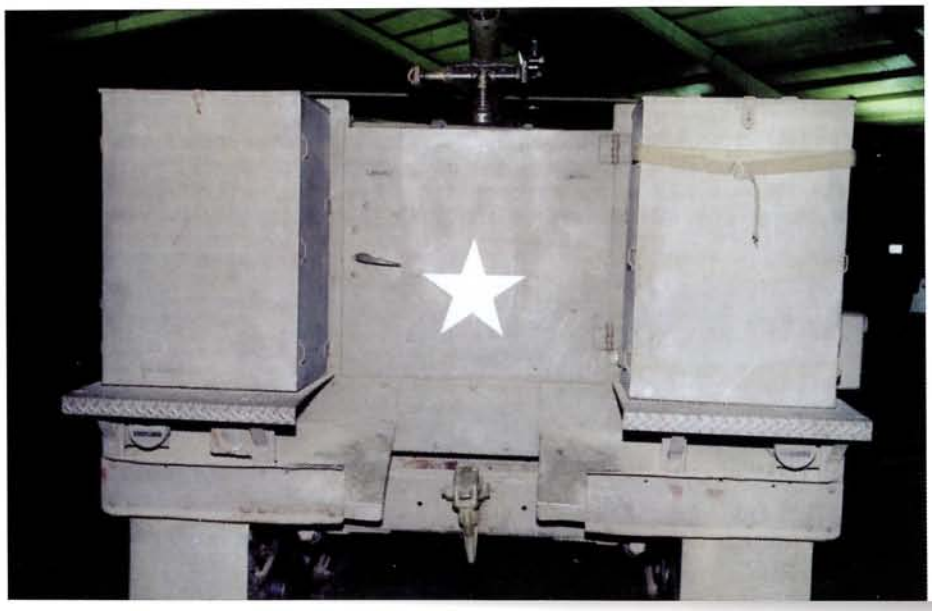


The M2 and M3 were very similar in external appearance. The M2 featured a shorter troop compartment and had large storage bins fitted along the left and right sides. These bins were fitted directly behind the driver's compartment. This particular vehicle is the M4 mortar carrier based on the M2. US Army M2s and M3s were painted Olive Drab (FS34087).

Four armored louvers at the engine compartment's front could be opened to allow air to flow into this compartment for engine cooling. The louvers were closed to protect the engine in a combat zone. The vehicle had 0.25-inch (6MM) face-hardened steel armor, except for the 0.5-inch (13MM) thick windshield. This M4 is fitted with the later style removable headlights.

Two small platforms are mounted on the M2's rear on either side of the troop compartment. This restored M2A1 at the Jacque Littlefield collection features late war style folding storage racks above these platforms. The main difference between the M2 and M2A1 was the latter's added M49 armored machine gun ring above the driver's compartment. Most markings on US Army vehicles were flat Insignia White (FS37875). (Green)

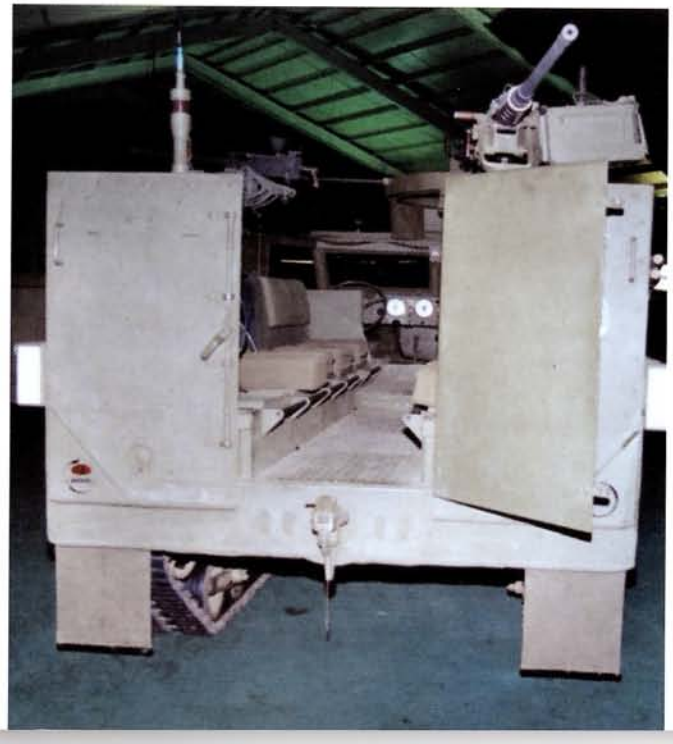
Unlike the M2, the M4 Mortar Carrier featured an access door at the rear. Two storage boxes were fitted above the small platforms for crew and vehicle gear on later production vehicles. The 81MM M1 mortar on the M4 was positioned to fire toward the rear.



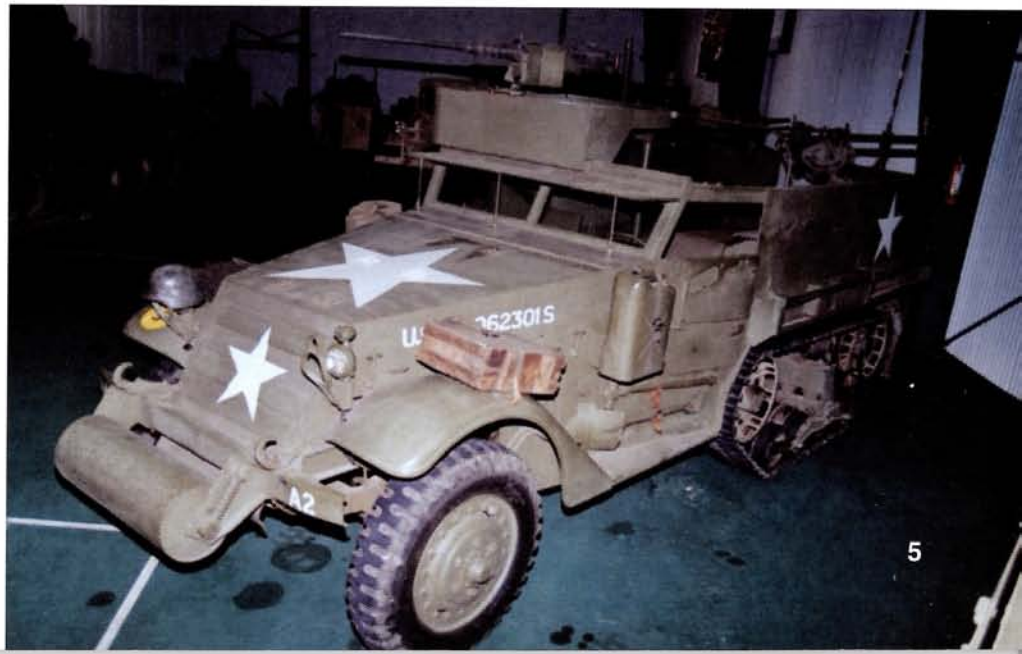
The M3 had a slightly longer troop compartment than the M2 that led to the elimination of the small rear-mounted platforms. This restored M3A1 is at the World War Two Vehicle Museum in Hubbard, Ohio. The main difference between the M3A1 and the M3 – as with the M2/M2A1 – is the M49 armored machine gun mount over the driver's compartment. A German *Stahlhelm* (steel helmet) is propped up on the right headlight.

The M3's front was virtually identical to the M2. This vehicle is fitted with the later style removable headlights. The roller on the front was designed to help the M3 go over small obstacles. The black 9 in the Orange-Yellow (FS33538) disc on the fender indicated this vehicle's approximate tonnage. This information determined if the M3A1 could safely cross some bridges.

The sides of both the M2 and M3 were mirror images of each other aside from tool storage. Rounded fenders were features of the M2s and M3s manufactured by the Autocar Company, White Motors, and Diamond T Motors. These fenders were also found on variants based on these vehicles.



Unlike the M2, the M3 featured a rear door since it was intended as a troop carrier. The door's inner surface was painted the same Olive Drab as the external surfaces. An M7A2 pintle mounted below the doorway was used to tow a variety of trailers and small guns.

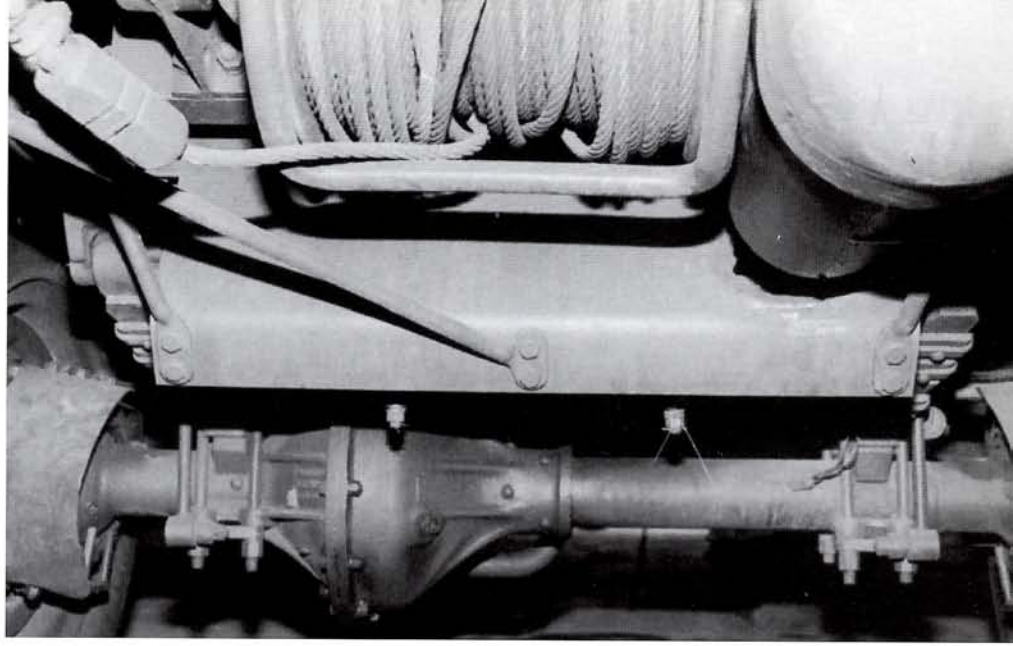


The US War Department awarded a contract to the International Harvester Company to meet the demand for half-tracks. This firm produced the M2 and M3 under the designations M9 and M5, respectively. This M5 featured the straight fenders and rounded rear corners that differentiated these vehicles from the M2 and M3. (Green)

Like the M2 and M3, both the M9 and M5 received the M49 armored ring mount and were correspondingly designated M9A1 and (Above) M5A1. All M5 and M9 variants had 0.3125-inch (8MM) homogenous armor plating instead of the 0.25-inch face-hardened steel of the M2 and M3 series. This gave more ballistic protection, but increased vehicle weight. (Hunnicutt)

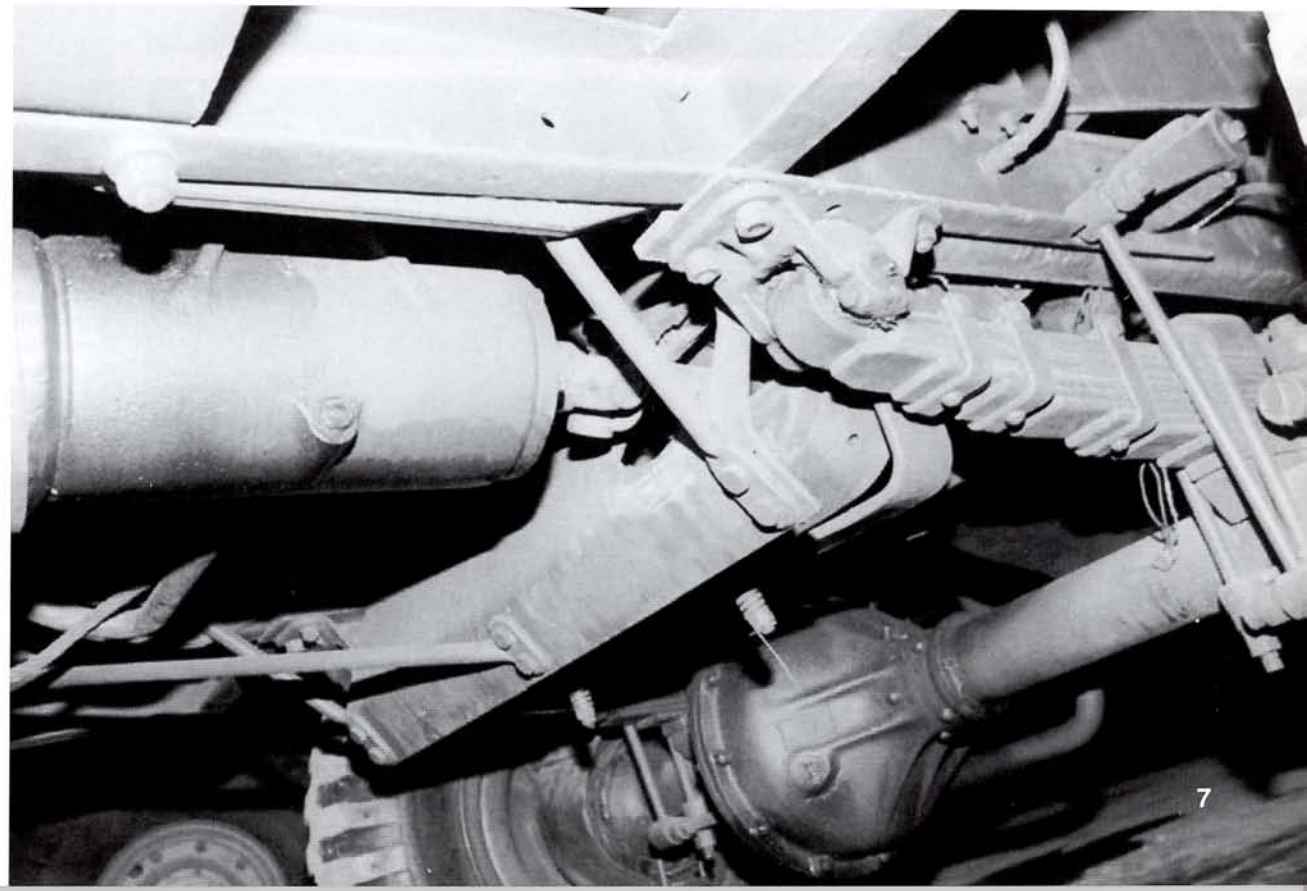
The M9A1 corresponded to the M2A1, except that it lacked the latter's side storage bin doors and was the same length as the M5. Both the M9A1 and the M2A1 had the same seating arrangement. (Hunnicutt)

The M9 series also featured a rear door, unlike the M2. The rounded rear corners were in marked contrast to the squared off arrangement on the M2 and M3. (Hunnicutt)

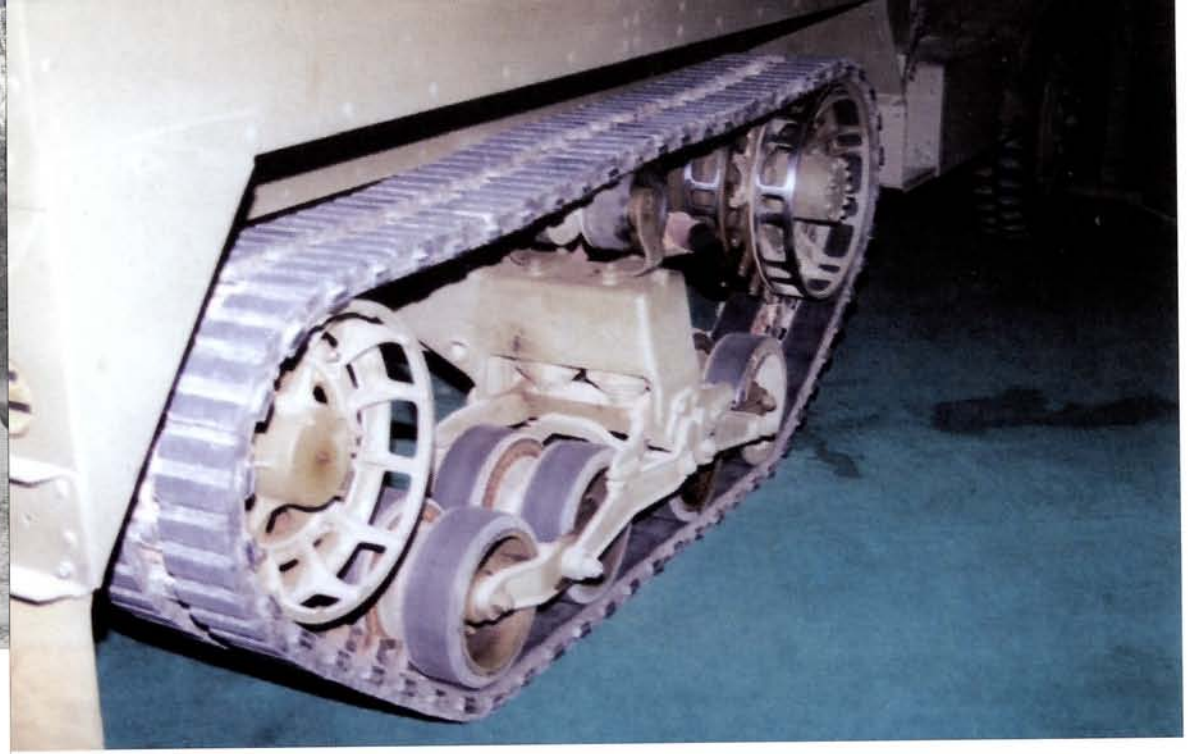


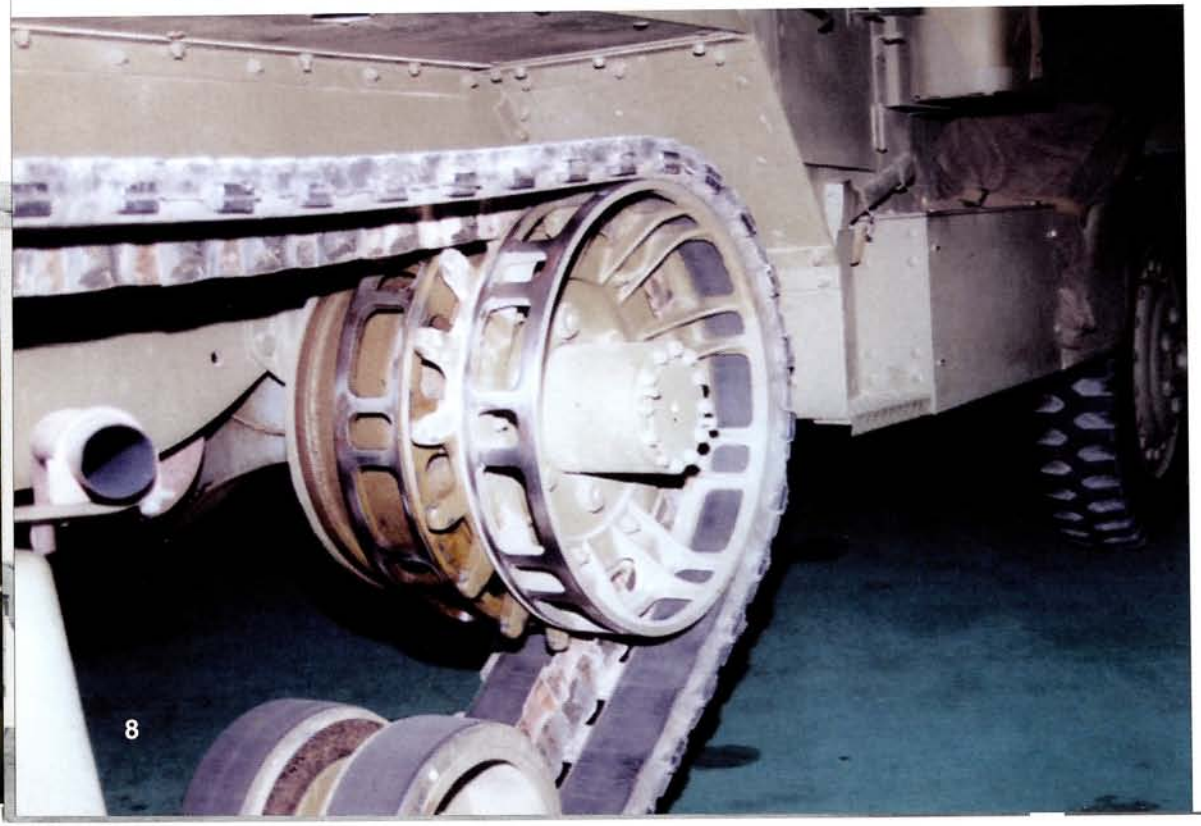
(Above) Both front wheels were fitted with 8.25-inch (21 CM) wide by 20-inch (50.8 CM) inside diameter tires. Early M2s and M3s had self-sealing tires, which had soft rubber between the harder outer rubber layers. This soft rubber rapidly swelled when punctured to close the leak. Later vehicles had 12-ply combat tires, which were simpler to repair in the field. These tires were fitted onto split bead rims with metal bead locks. Six lug nuts arrayed around the hub attached each wheel to the axle. (Ward)

(Above Right) The front axle was a Timken F35-HX-1 split type hybrid spiral bevel unit. Power was supplied through a Spicer 3461 manual transmission, which had four forward speeds and one reverse speed. The differential housing is mounted on the axle and is offset towards the right wheel. (Ward)



(Right) Leaf springs were only fitted to the vehicle's front. U-shaped brackets held 11 semi-elliptical, twin backed springs of various lengths together. These suspension units were mounted to the engine frame and the axle. (Ward)

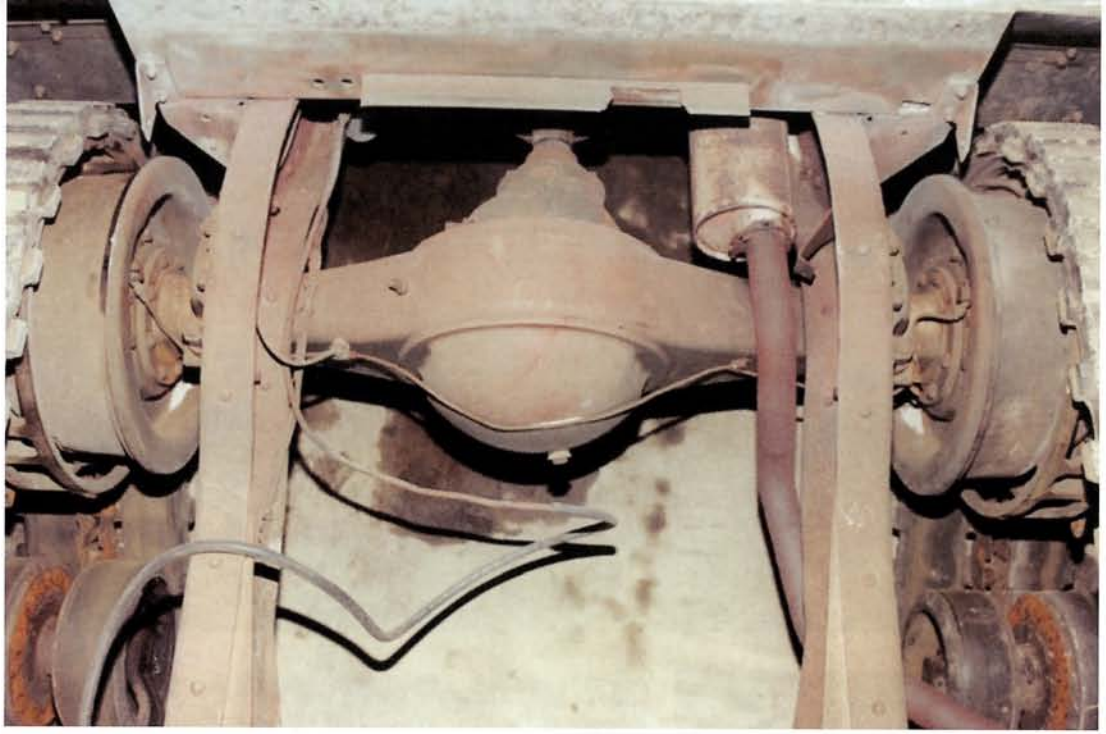




(Above Left) The key to the M2/M3 series' mobility was the track assembly at the vehicle's rear. This assembly consisted of a front-mounted drive sprocket, a bogie assembly, a rear-mounted idler wheel, and an endless band track unit. M2 and M3 series vehicles each had a maximum grade of 60 percent. They crossed vertical walls up to 12 inches (30.5 CM) high, forded streams and ponds up to 32 inches (81.3 CM) deep, and had a minimum turning circle of 59 feet (18 M) in diameter. (Ward)

(Above) Eighteen teeth are mounted inside the drive sprocket. These teeth gripped rectangular openings on the center of the track unit. This sprocket was fitted at the front of the track assembly behind the driver's compartment. Framed steel wheels that flank the teeth guided and supported the track. (Ward)

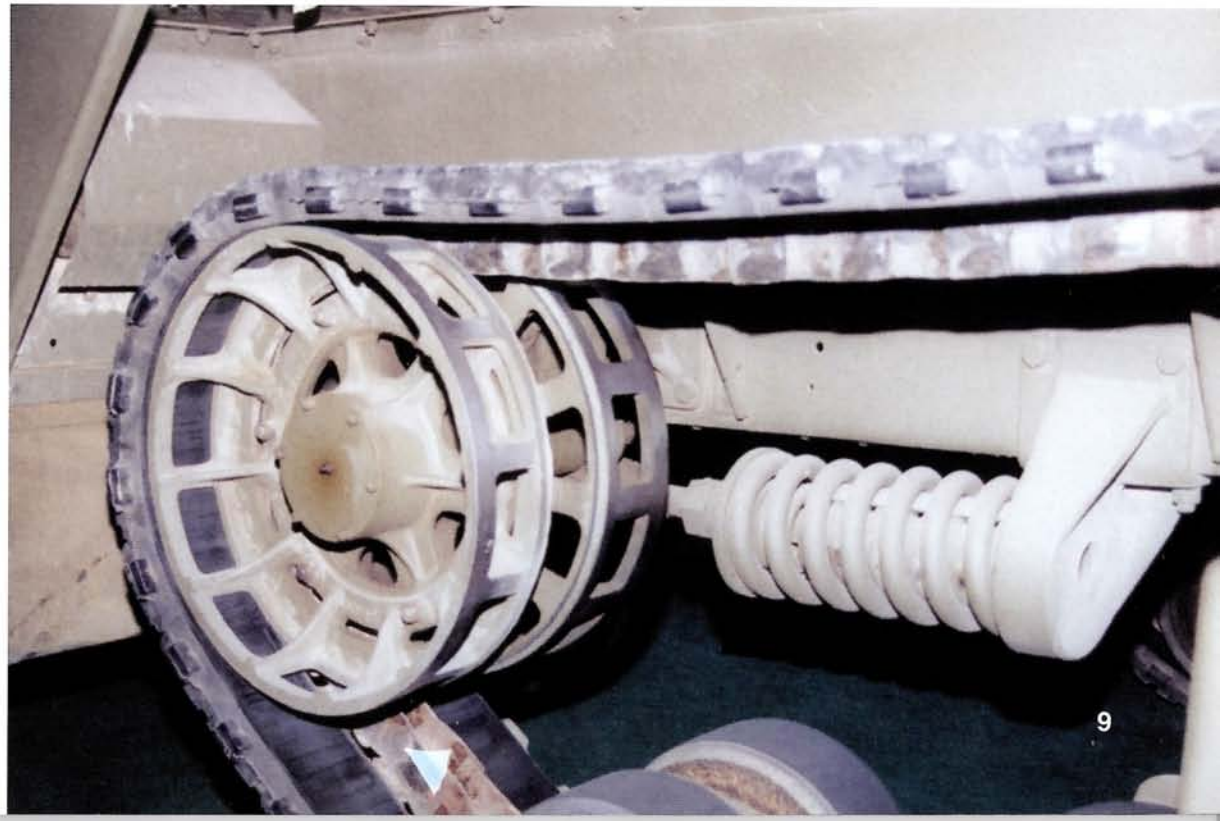
(Left) The sprocket and wheel assembly were attached to the axle and received engine power via the transmission. The drive sprockets were similar in appearance to the idler wheels; however, the front wheels were not interchangeable and featured a different cutout pattern along their rim.

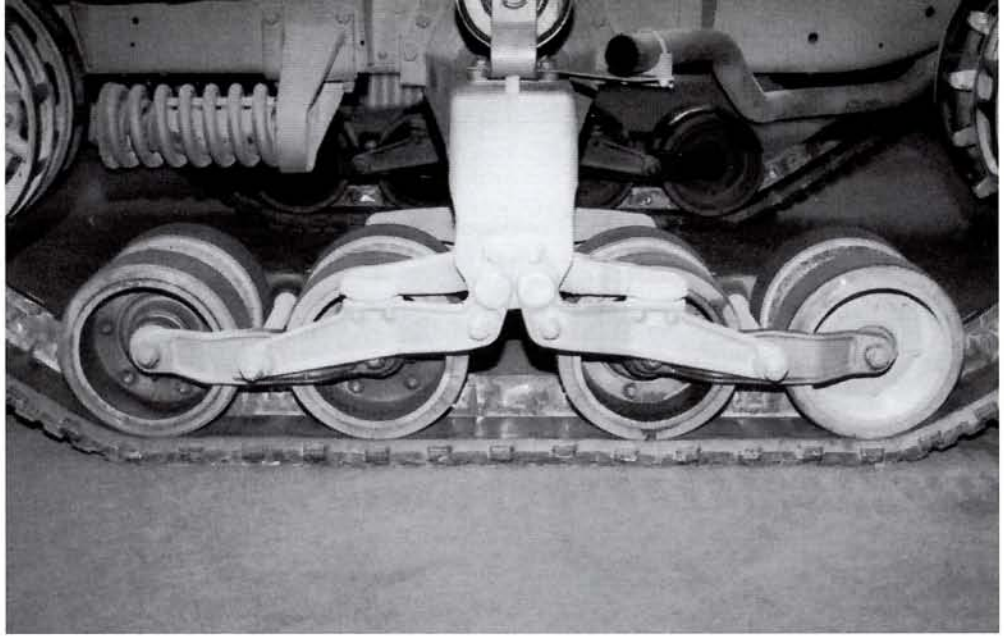


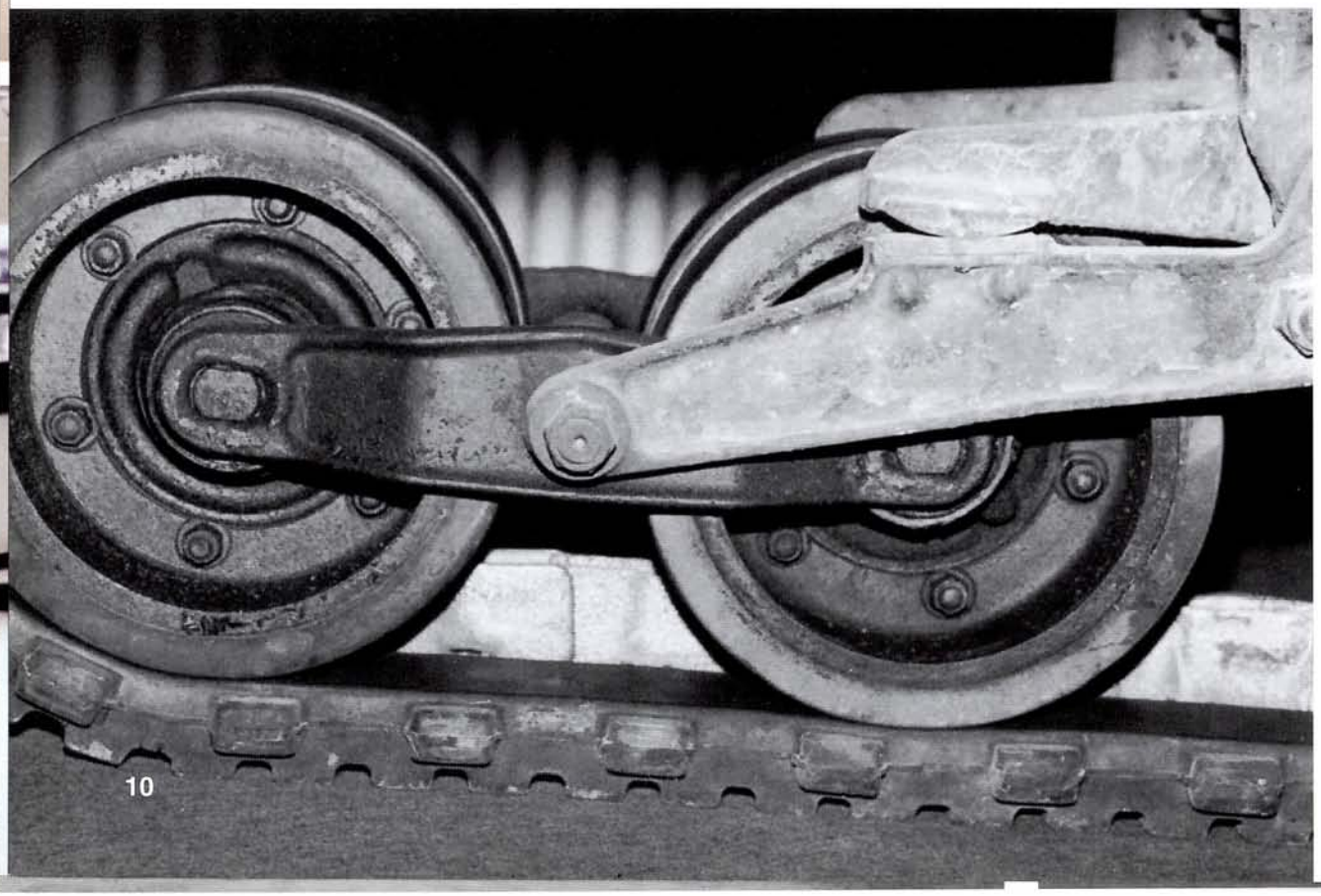
(Above) The frame bowed up where the rear axle was attached to it. This was done in order to reduce the vehicle's height. The drive shaft from the engine ran to the differential housing located astride the axle. Transfer units and drive sprocket attachment points are located immediately outboard of the frames. A cylindrical muffler is located beside the right frame, with the exhaust outlet running aft from the muffler. (Ward)

(Above Right) An idler wheel is located at the rear of the track assembly. This unpowered wheel was different in both appearance and function from the drive sprocket at the front. Initial production M2s and M3s had the idler wheel bolted onto the assembly, while later vehicles had a freely moving wheel. (Ward)

(Right) Problems with thrown tracks and suspension damage led to the development of an idler spring. This coiled spring adjusted for off-road movement and solved much of the early trouble. The cutouts on the idler wheel are similar in general appearance to those of the drive sprocket. (Ward)







(Above Left) The idler spring was bolted to the axle housing inboard of the idler wheel. This spring helped compensate for cross-country movement. The track adjustment rod at the right was turned to increase or decrease track tension. Increased tension greatly accelerated track wear, while decreased tension increased the risk of the track coming off the vehicle.

(Above) The M2/M3 series bogie assembly consisted of the rollers, suspension arm, bracket assembly, and a track support roller at the top. Four sets of twin rollers/wheels were mounted in a roller frame. (Ward)

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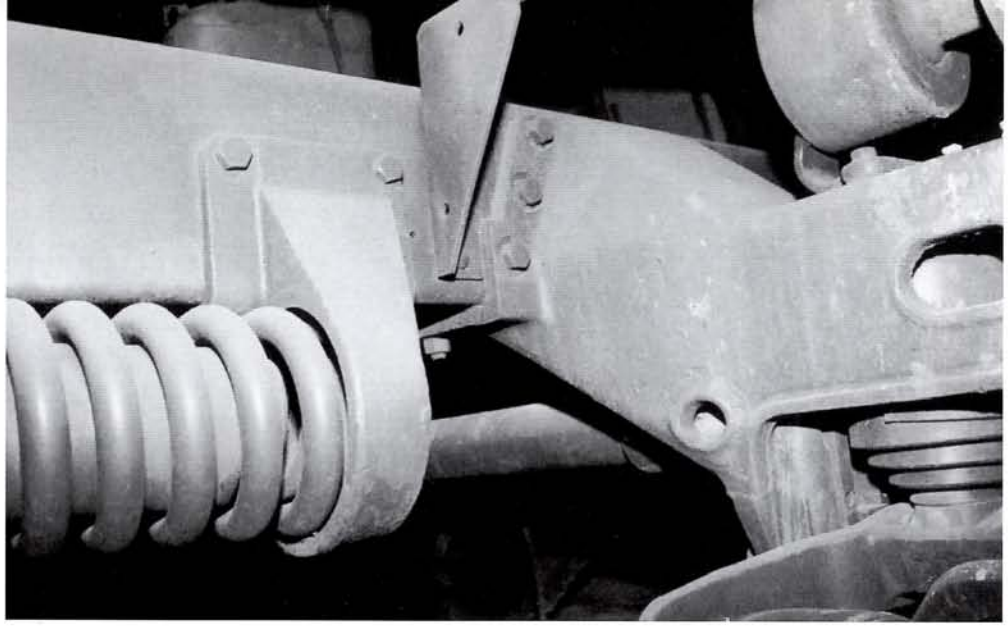
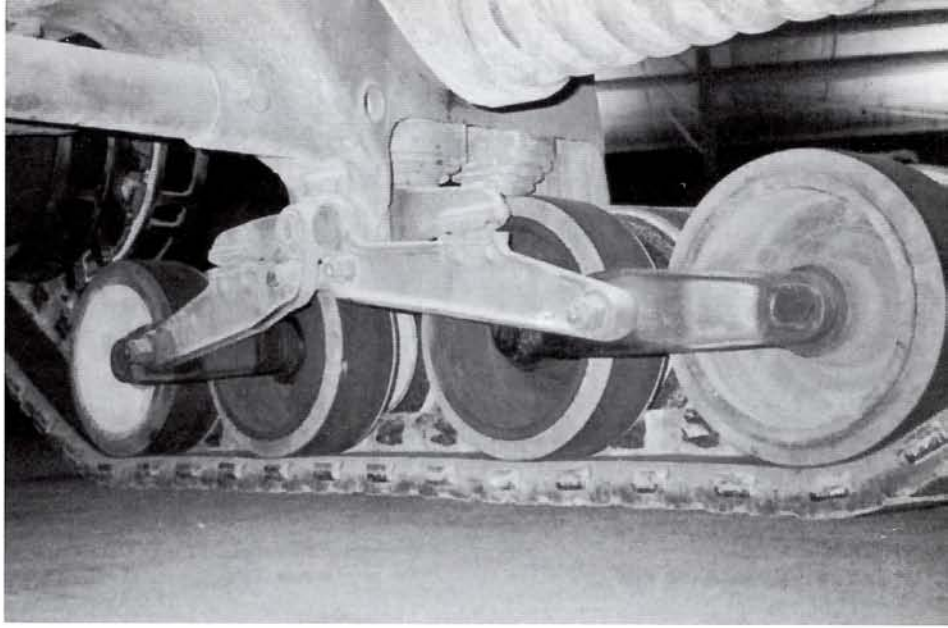
(Left) Each roller frame held four rollers/wheels in side-by-side pairs. Each unit moved to conform to the terrain along with the main arm that was attached to the bracket assembly. Each roller was composed of a metal wheel with a solid rubber tire bonded onto the wheel. (Ward)

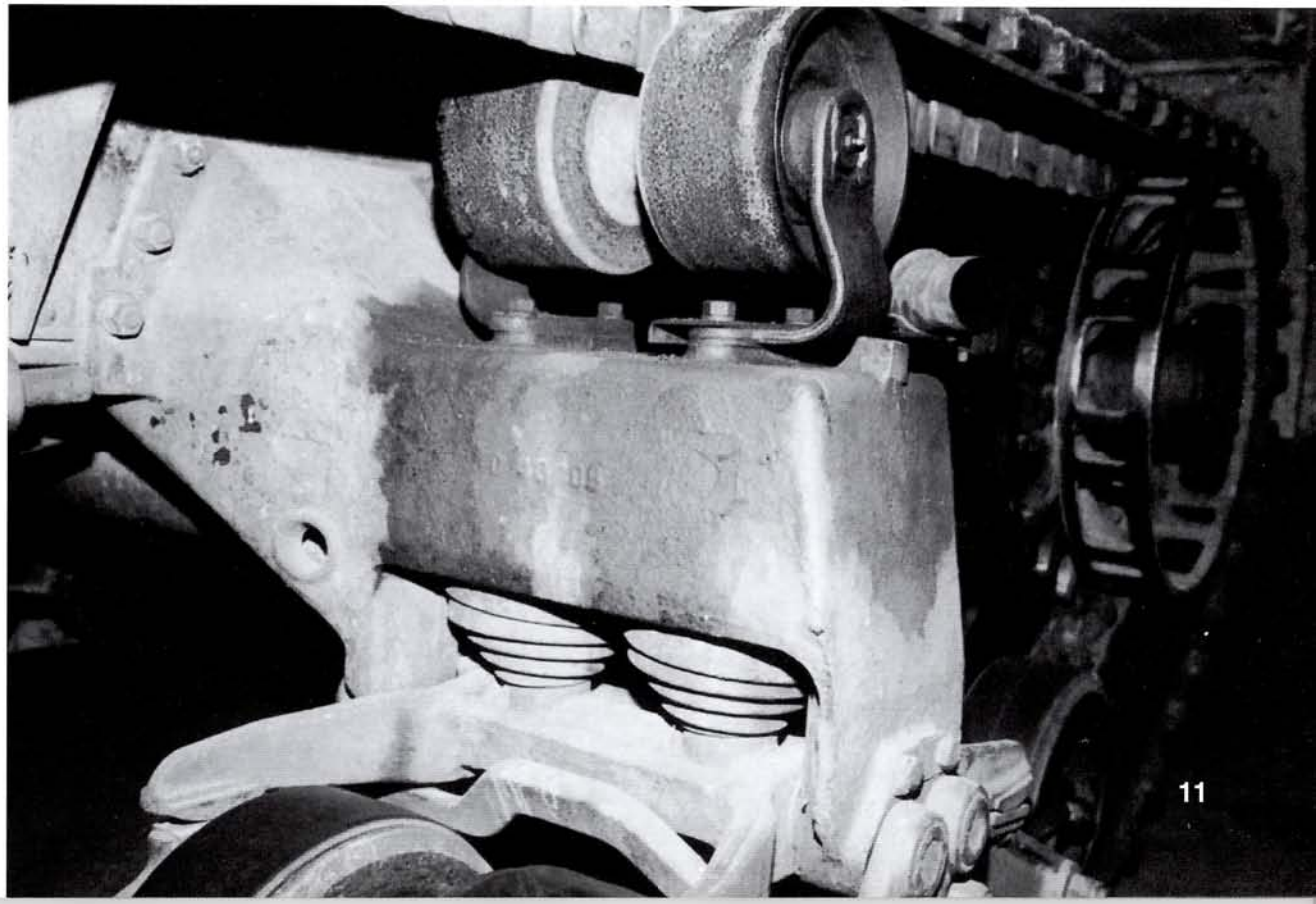




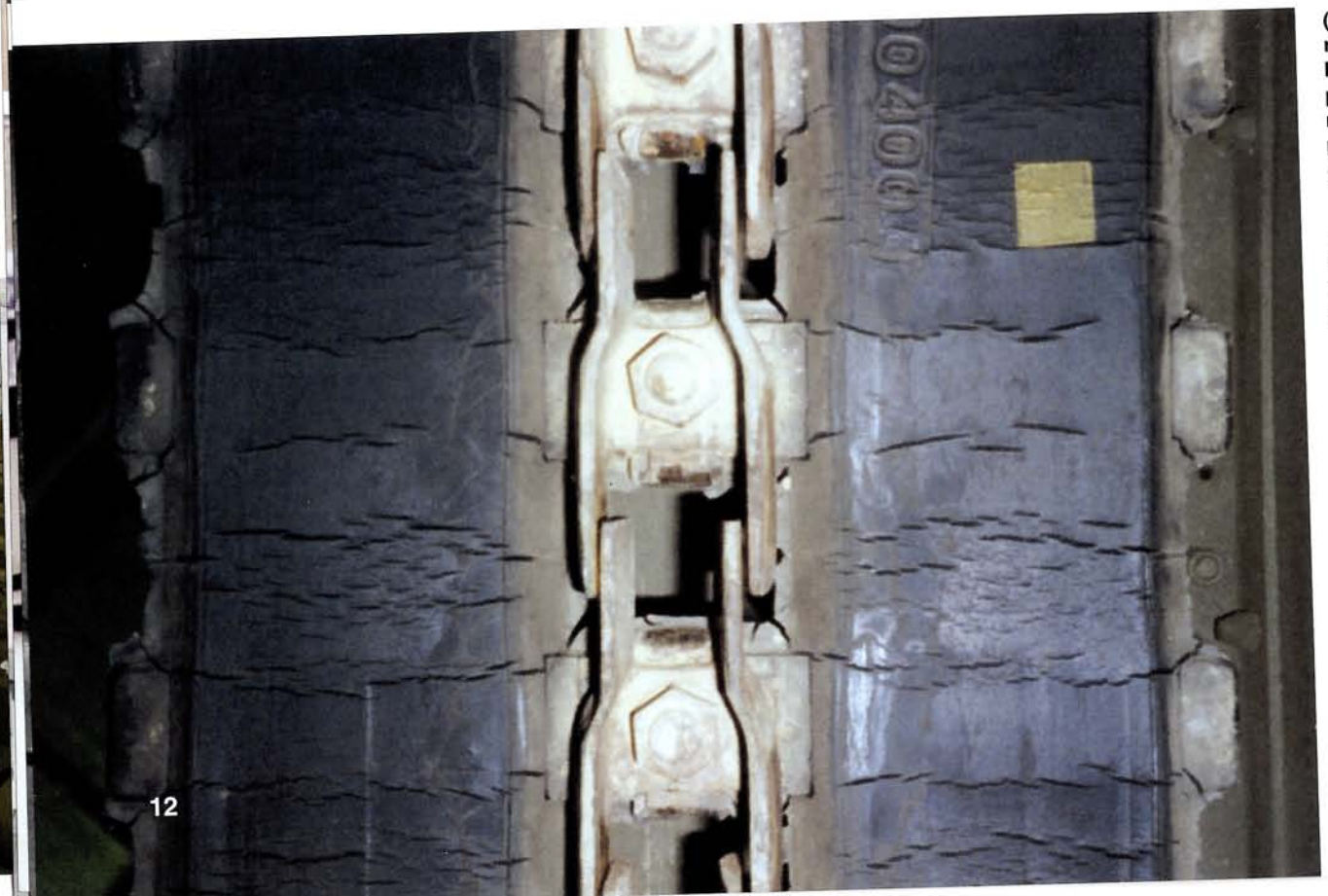
(Above) The bracket assembly was bolted onto the side and bottom of the frame. This rigid mount made for a rough ride over uneven terrain, as the author found out during a ride at a local collector's farm. The idler spring mounted on the frame is of the later double type that began appearing on M2/M3 series vehicles in July of 1943. (Ward)

(Above Right) The suspension unit's inner arms were identical to the outboard arms. Both bogie units were held in alignment using a tubular cross support that connected each bogie frame bracket. The track teeth passed between the inner and outer road wheels.

(Right) Twin rubber tired track support rollers were mounted atop the bracket assembly. These rollers helped keep the tracks from being thrown. Twin volute (spiral) springs were also fitted to the top of this assembly. These springs helped lessen the impact of moving over rough terrain; however, cross-country riding in a half-track was an uncomfortable experience compared to riding on a paved road. (Ward)

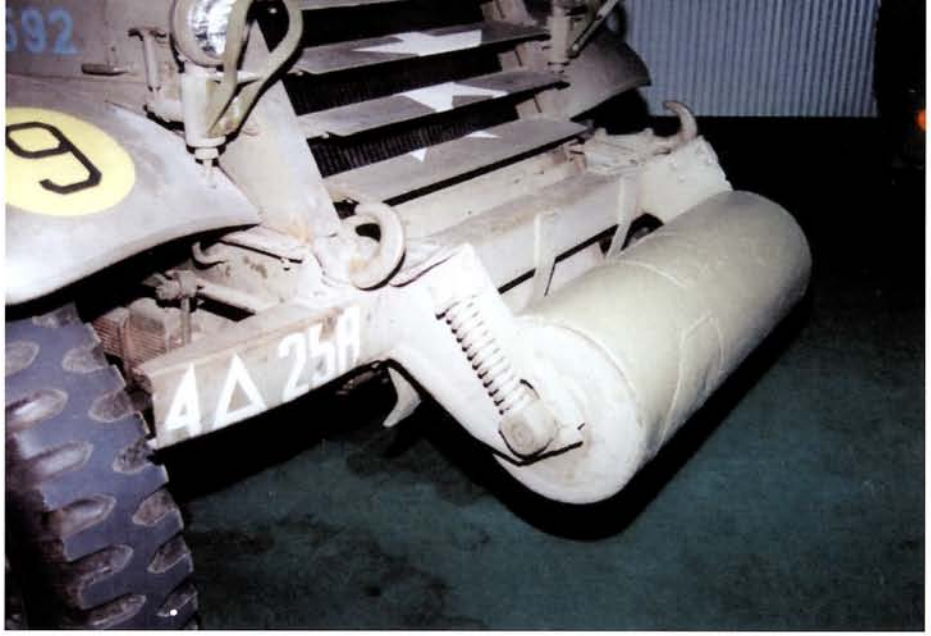


(Above Left) B.F. Goodrich designed the M2/M3's continuous rubber band track. It consisted of steel cables bolted together by steel crosspieces, with center guides attached to the cross-pieces. Rubber was then molded over the entire unit, which made for a continuous track with no breaks. Rectangular cross pieces located along the track's side helped with traction. (Ward)



(Above) The track guides were individual units that overlapped the one behind it. Although these steel guides were painted Olive Drab, constant use wore the paint off the sides and gave them a worn metal appearance when in use.

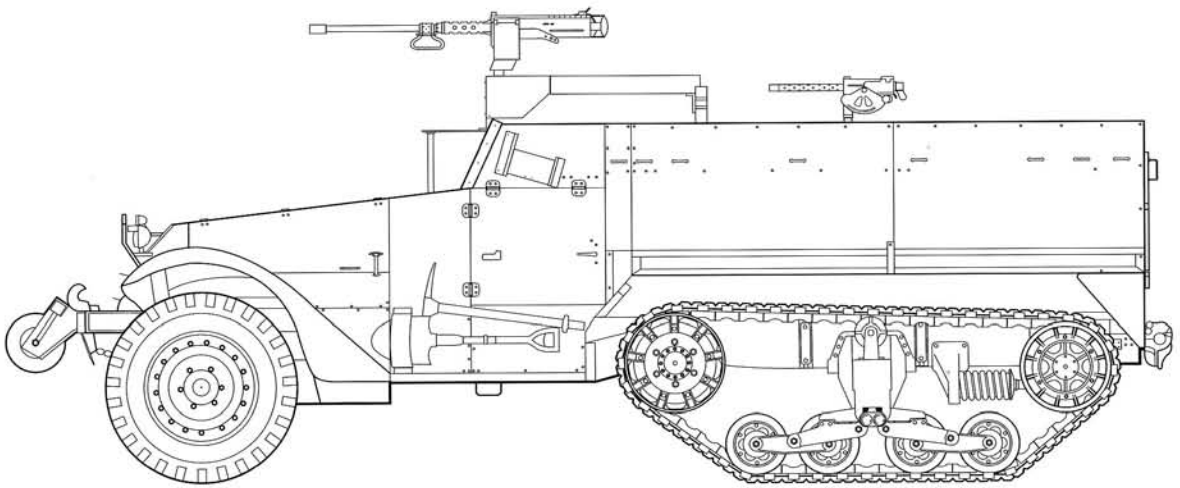
(Left) Each track section was bolted to the center cross piece. After the cables were attached, the entire unit was covered in rubber for a continuous track without any joining point. This made for a strong, yet flexible track. Age has cracked the rubber on this vehicle's track.

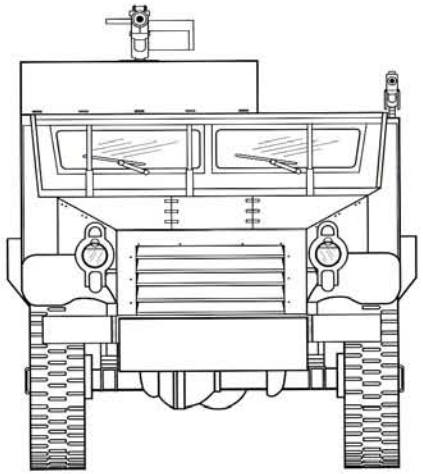


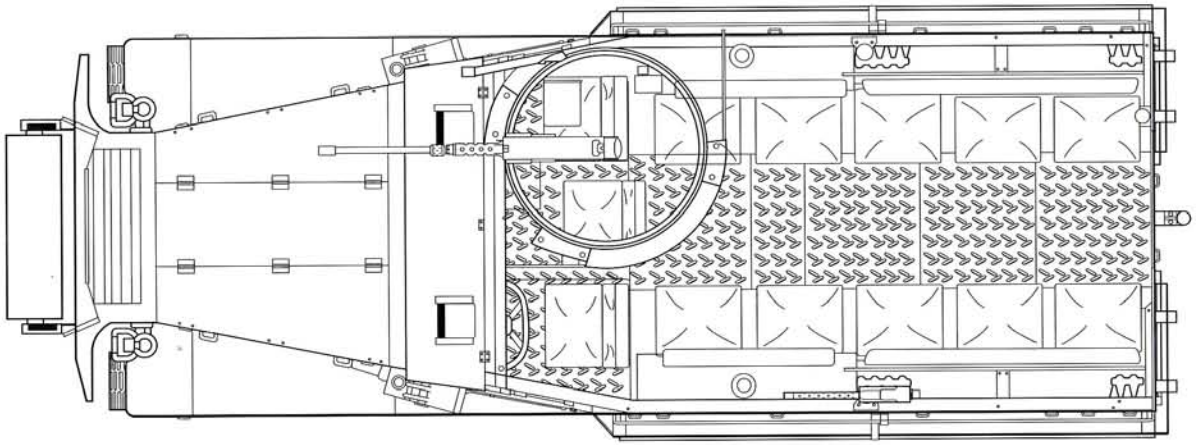
(Above) A roller attached to the bumper helped the vehicle go over uneven ground. It was made of a rolled steel plate welded to a pair of circular plates on each end. A reinforced tube was installed inside this roller and fitted into two brackets mounted to the bumper. The White code 4Δ25R on the right bumper indicated this M2 was assigned to the 4th Armored Division, 25th Reconnaissance Battalion. (Ward)

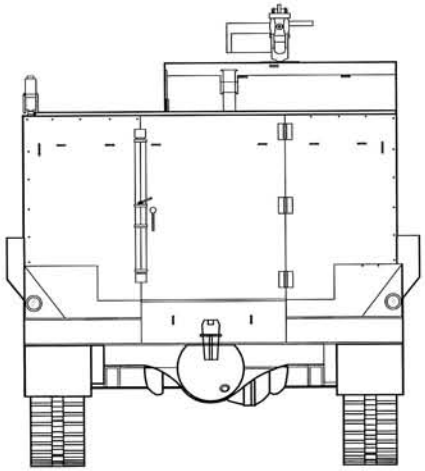
(Above Right) Springs on either side of the brackets allow the roller to move when an obstacle is encountered. Towing hooks were attached to the bumper on either side of the roller. The White code A-19 on the left bumper indicated this was the 19th vehicle assigned to Company A. (Ward)

(Right) The roller was approximately the length of the front armored louvers. The short distance between the roller and the bumper allowed the vehicle to help negotiate obstacles.



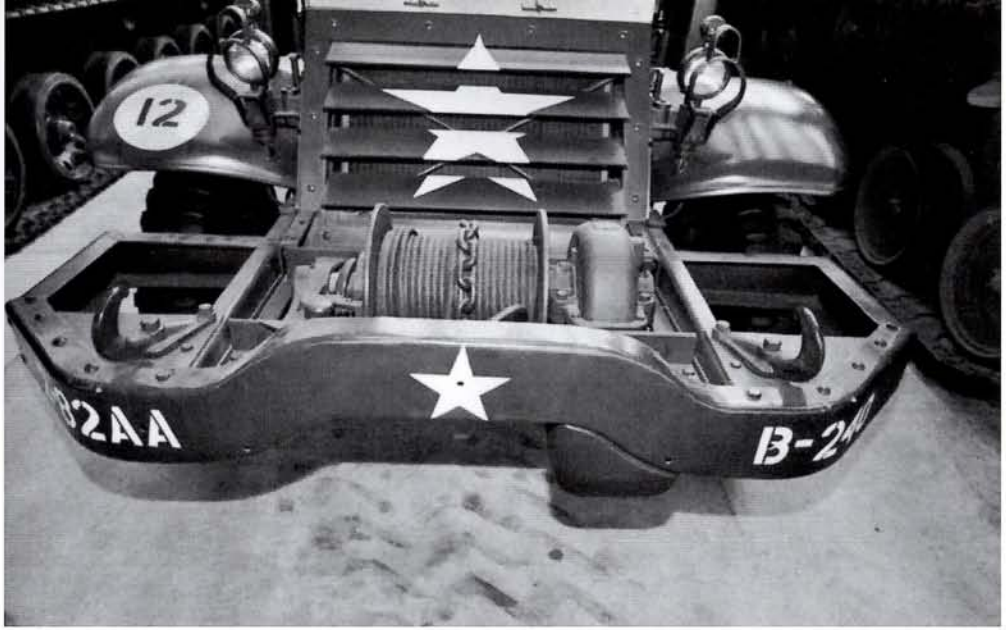




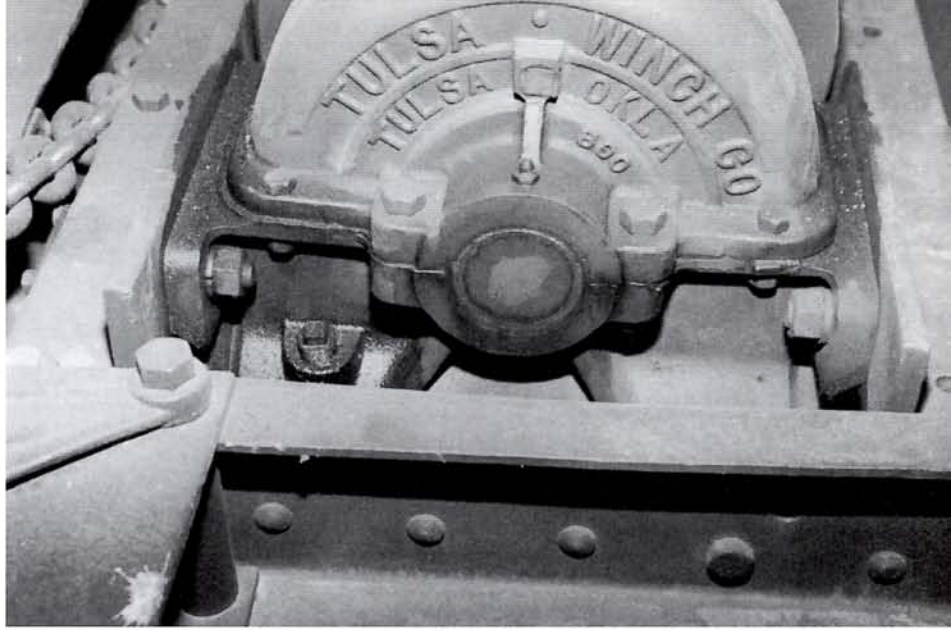


M3A1 Half-Track Specifications

Length:.....20 feet 2.6 inches (6.2 M)
Width:.....7 feet 3.5 inches (2.2 M)
Height: .....8 feet 10 inches (2.7 M)
Empty Weight: .....15,300 pounds (6940 KG)
Maximum Weight:..20,500 pounds (9299 KG)
Powerplant: .....One 147 HP White 160AX six-cylinder, liquid-cooled, inline engine
Transmission: .....Manual – Four speeds forward, one reverse
Armament:.....One .50 caliber (12.7MM) Browning M2HB machine gun with 300 rounds in ring mount beside driver and provision for two .30 caliber (7.62MM) Browning M1919 machine guns with 2000 rounds in troop compartment
Maximum Speed: ..45 MPH (72 KMH) on Road
Range: .....210 miles (338 KM)
Crew: .....Two, plus 11 troops

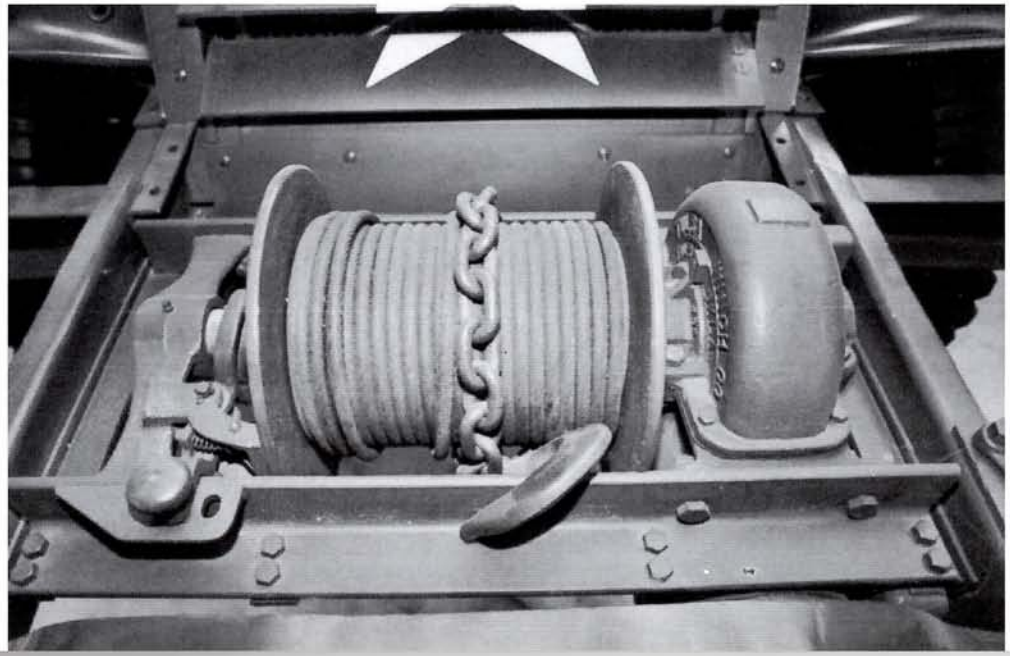


A Tulsa Model 18G winch was sometimes installed in place of the roller on M2/M3 series vehicles. This winch was used to help extract the vehicle from mud or to assist other vehicles. The vehicle's transmission supplied power to the winch. (Green)

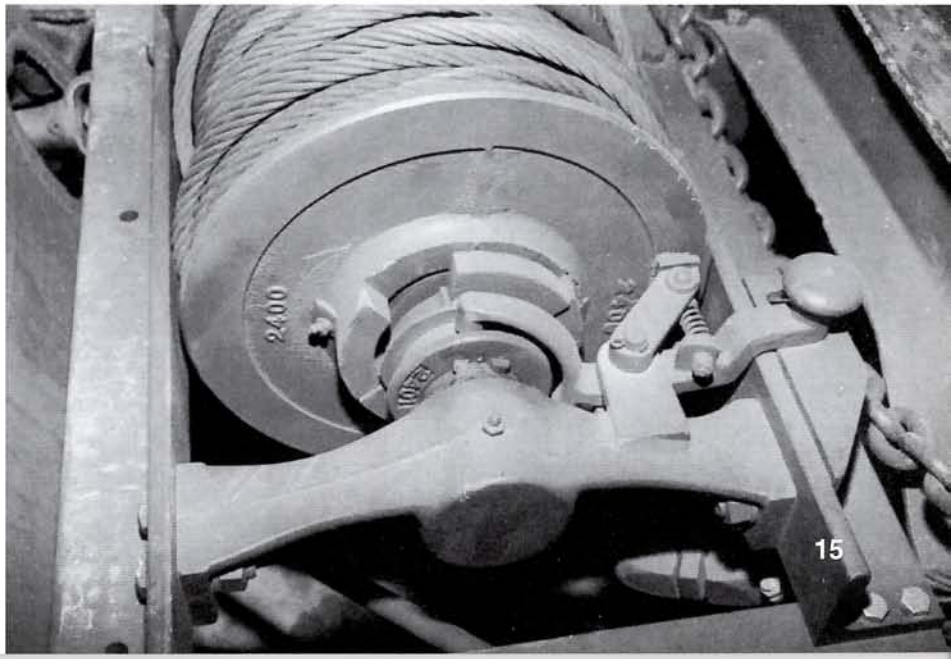


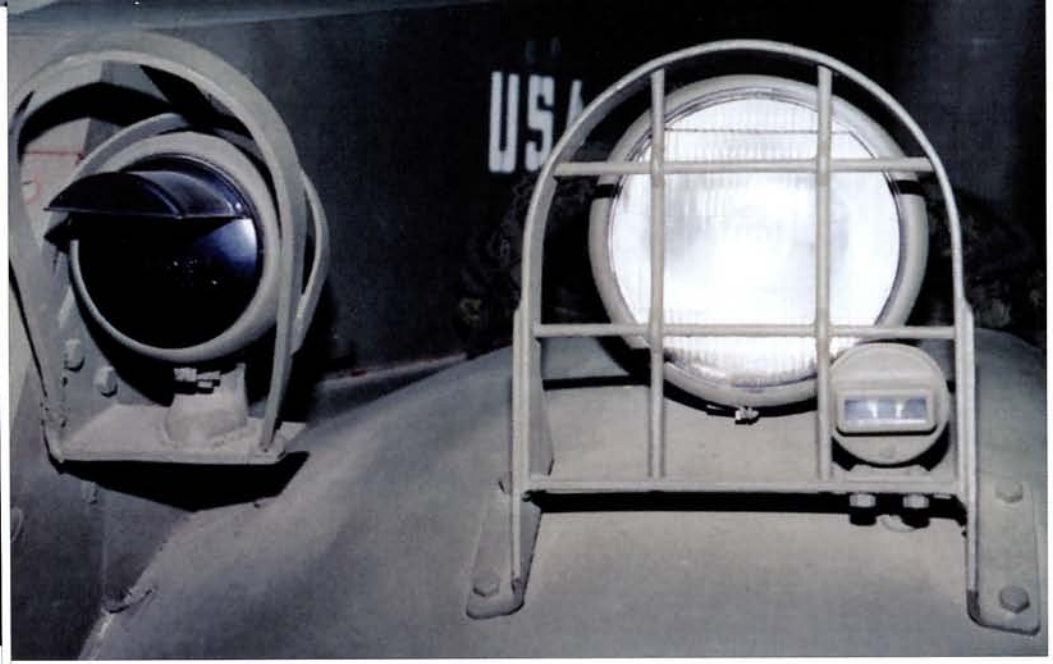
The winch motor was mounted on the left side of the unit. The Tulsa Winch Company name is embossed on the side of the winch. Installation of the winch increased the vehicle's length by seven inches (17.8 CM). (Ward)

The 175-foot (53.3 M) long steel cable was capable of handling a 10,000-pound (4536 KG) load. Circular plates flanking the cable coil are part of the drum to keep the cable lined up. A chain employed for towing is draped over this coil.



The sliding clutch block is mounted on the right side of the winch unit. This block is the small segmented fitting attached to the side of the drum. The small fitting coming off the front of the drum at a 45° angle is the drum flange drag brake, while the hand brake lever knob is in front of this brake. (Ward)

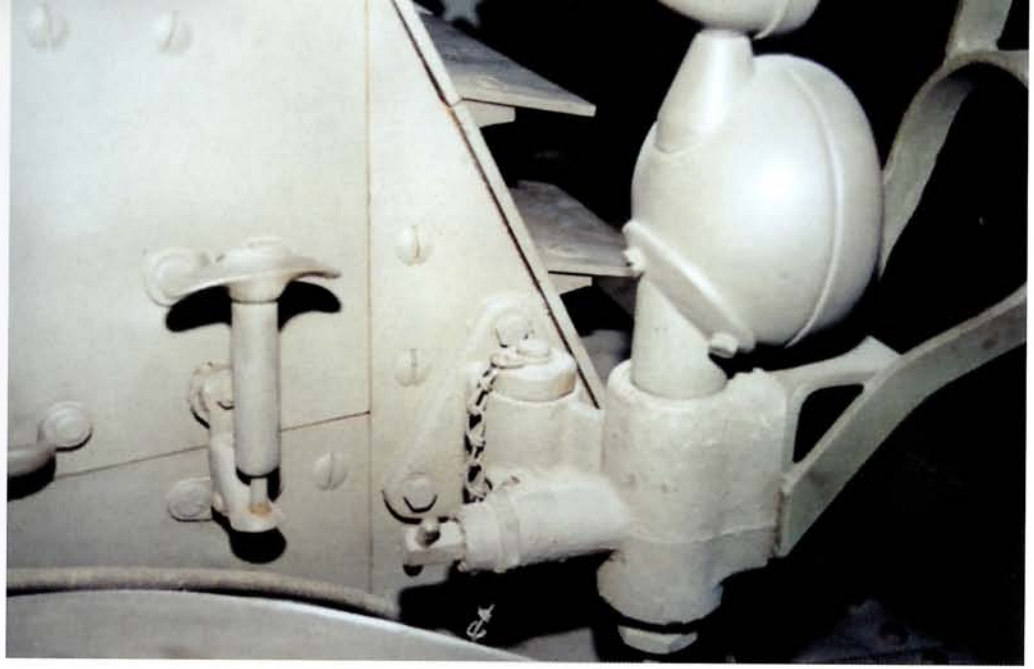




(Above Left) M2s and M3s were originally equipped with a fixed headlight on both the left and right fenders. A metal brush guard in front of this light kept tree branches and other similar objects from hitting and damaging the light. A small marker light for convoy travel was attached to the brush guard on the lower left side of this mount. A later model blackout driving light was mounted to the engine compartment inboard of the headlight. This driving light was employed while driving under blackout conditions at or near the front. An elliptical visor kept the light from being viewed from above. (Ward)

(Above) Electrical connections ran from the lights into the engine compartment. Both ran through holes in the fender, into the engine compartment, and up to the driver's compartment. (Ward)

(Left) The older style fender headlights were prone to damage under combat conditions. This led to their replacement by new removable headlights on later production M2s and M3s. These were mounted on the engine compartment sides near the fenders. A small marker light is mounted atop the headlight. (Ward)



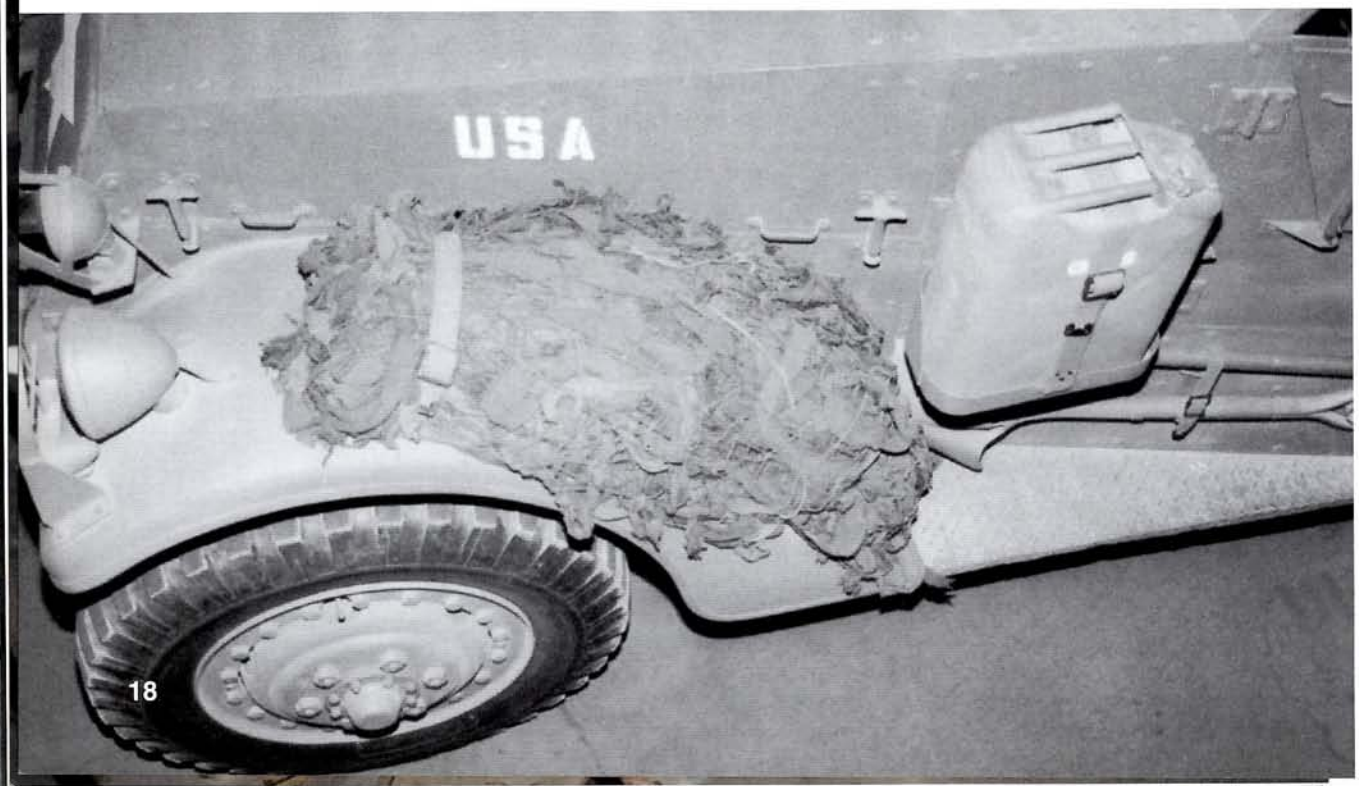
The later headlight-mounting bracket is bolted to the side of the engine compartment. The T-shaped retaining pin handle comes out of the bracket's rear. A chain connected the pin to a mounting bracket on the fender. This plug was installed in the bracket to keep out dirt and moisture when the light was removed. (Ward)

Two sets of tie-downs were welded to the fenders on both the left and right sides. These tie-downs were used to strap down equipment, including camouflage nets, tarpaulins, and additional supplies.

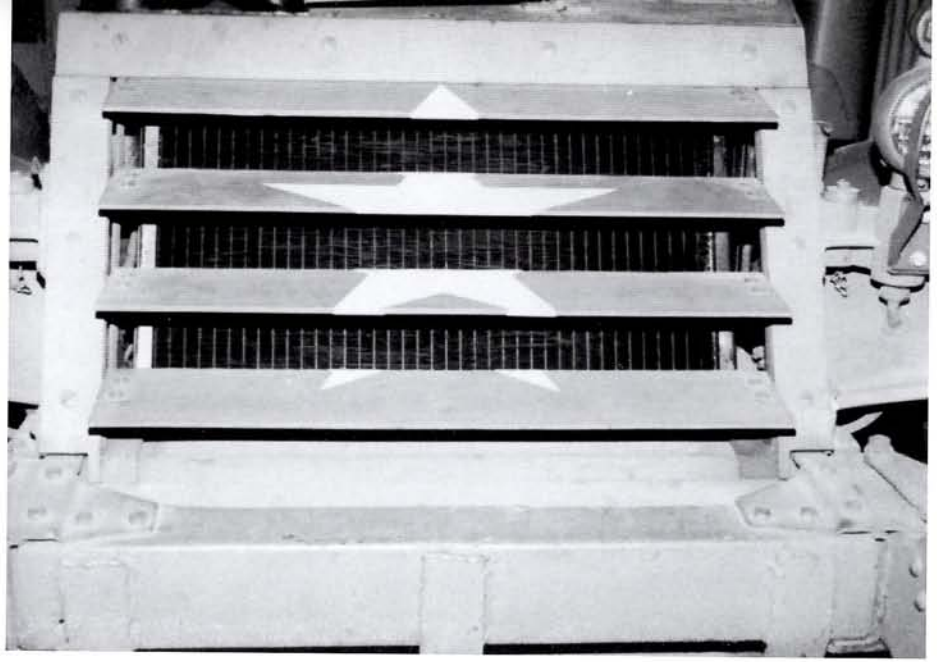
A new brush guard was also designed to go with the removable headlights. This guard was fitted to the front of the mounting bracket. A combination blackout light and marker light was mounted atop the left headlight for night travel. (Ward)

Canvas straps were designed to fit through the two pairs of tie-downs mounted at the top and rear of the fenders. These straps secured a variety of equipment to the fenders. They were loosened or tightened depending upon the amount of tension required for the item.

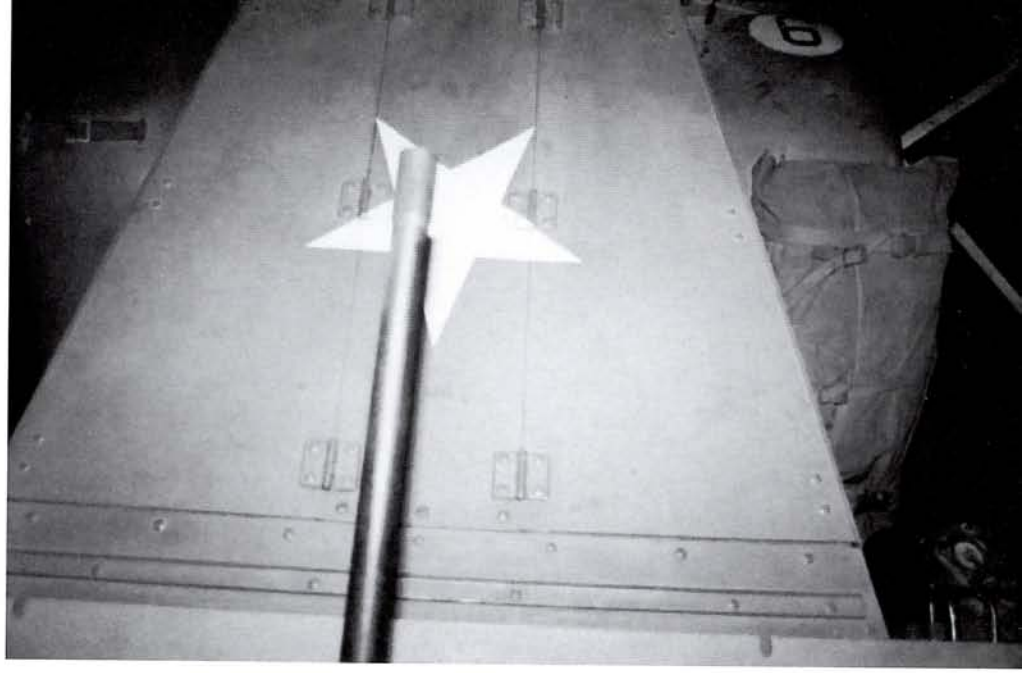
A rolled canvas top for the crew compartment is fastened to the left fender of this half-track. Both canvas straps were loosened to secure this bulky item. The compartment top was installed to keep rain and snow out of the crew compartment. (Ward)



A camouflage net is mounted on this half-track's left fender. This net was draped over stationary vehicles, artillery pieces, and command posts to hide these items from enemy surveillance. Other items such as ration boxes and ammunition containers could also be carried on the fender using the canvas straps and tie-downs. A 5-gallon (19 L) jerry can for additional fuel or water is mounted to the engine compartment aft of the camouflage net. Entrenching tools are fastened below this can. The short running board attached to the aft fender section had a non-skid surface for better footing. (Ward)

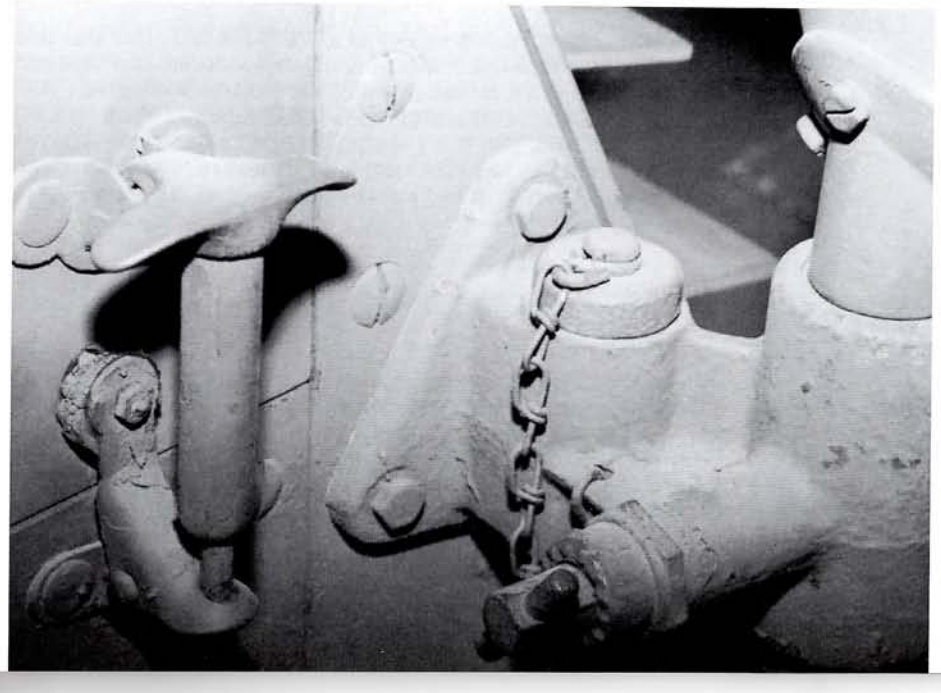


Four armored louvers in the front of the engine compartment protected the radiator. These louvers were set at a 26° angle from the vertical, which slightly increased the 0.25-inch armor's protection from plunging rounds and shrapnel. (Ward)

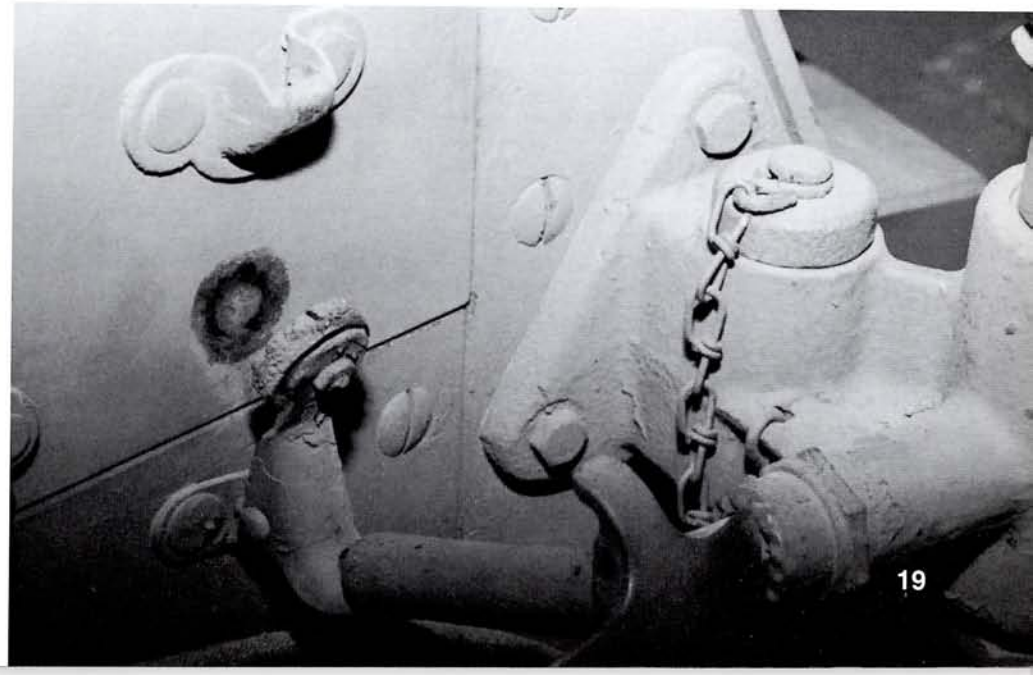


The engine compartment side and top panels were attached to a center panel in the middle of the compartment's upper section. Three hinges located at the top, center, and bottom held the moveable panels in place.

Two small latches at the front and rear of the side panels held them in place. The latch was released by lifting up on the curved upper flange. The rear part of the headlight mount is located in front of the latch. (Ward)



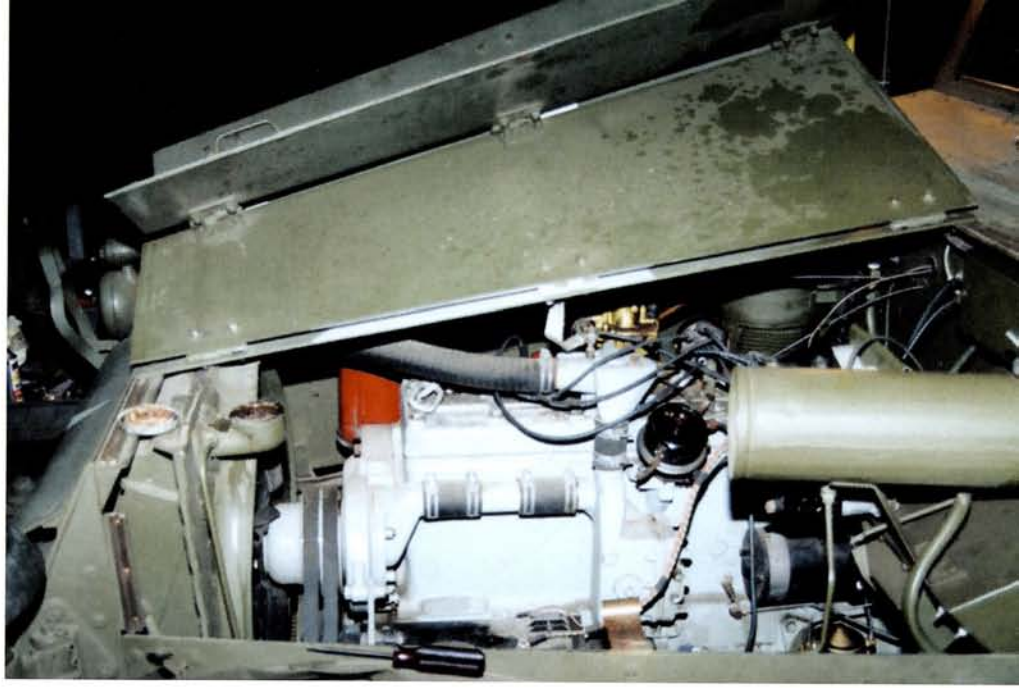
Lifting the bottom flange unhooked the upper part of the latch from its holder on the panel. This latch tilted back to release the engine panel. A small rubber pad helped to ensure a tight seal. (Ward)



(Above Left) The engine compartment panel folded up and over the top of the engine compartment. Interior hinges allowed the panels to fold over on top of themselves. Inner surfaces were painted the same Olive Drab as the external surfaces. (Ward)

(Above) The M2/M3 was powered by a White 160AX engine that produced 147 HP at 3000 RPM. It was a four-cycle, six-cylinder inline, liquid cooled engine with a displacement of 386 cubic inches (6325.4 CM³). The 160AX burned 72-octane gasoline and required 12 quarts (11.4 L) of oil. This engine had a dry weight of 1015 pounds (460 KG). The 160AX was 52.25 inches (132.7 CM) long, 26 inches (66 CM) wide, and 37 inches (94 CM) high. It had a maximum torque of 325 pound-feet at 1200 RPM. (Ward)

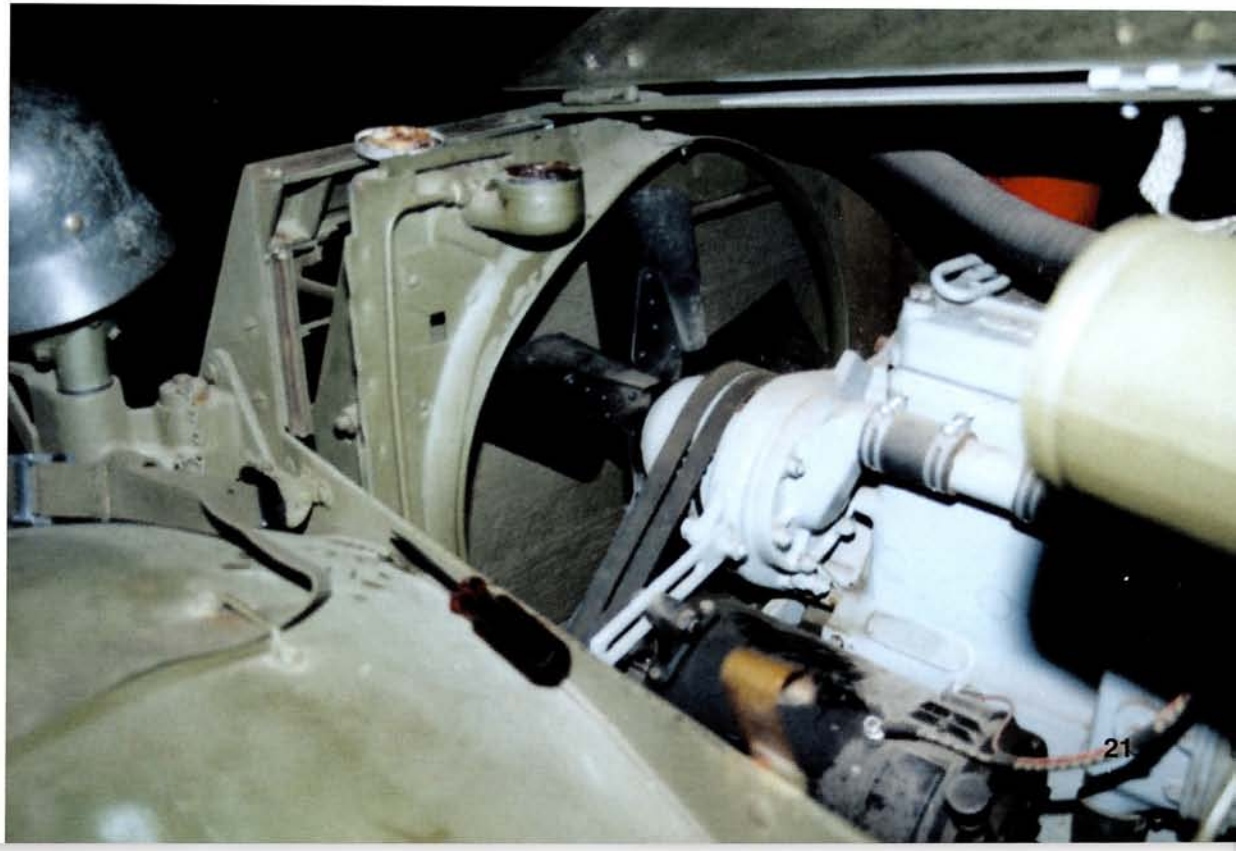
(Left) The radiator was mounted at the front of the engine compartment. A cylindrical oil filter is located directly behind the radiator, while a rubber radiator hose ran from the radiator above the oil filter. The exhaust manifold aft of the oil filter connected each engine cylinder to the exhaust pipe further aft. (Ward)



(Above) The cylindrical air filter is mounted to the engine compartment's firewall. A rubber pipe connects the top of the air filter to the carburetor, where air and fuel were combined before being ignited in the engine cylinders. The black oil filler cap is located beside the carburetor's base. (Ward)

(Above Right) The left side of the engine was relatively uncluttered, compared to the right side. An oil reservoir is the small cylindrical tank at the rear. The distributor immediately in front of this reservoir sent electrical current to the spark plugs located in each engine cylinder. A fuel pump is immediately under the cranking motor. (Ward)

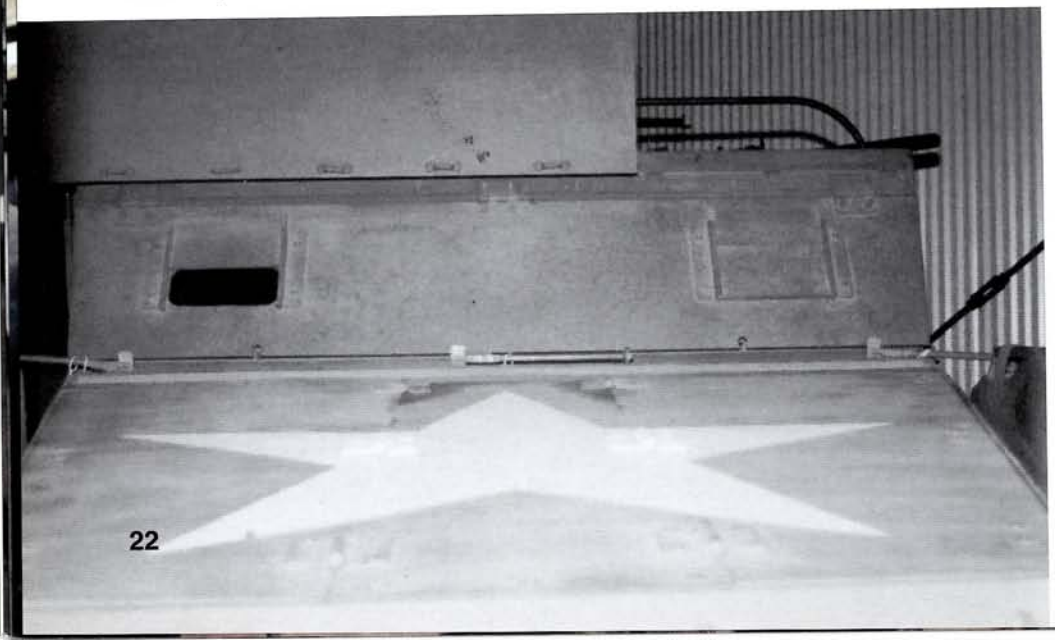
(Right) The five-bladed engine fan was mounted slightly offset to the left. The twin belts behind it were connected to the water pump directly behind the belts and the generator just visible below the water pump. The radiator filler is fastened to the upper left corner of the fan assembly. M2/M3 series vehicles had a radiator capacity of 26 quarts (24.6 L). A German *Stahlhelm* (steel helmet) rests atop the left headlight assembly on this preserved vehicle. (Ward)



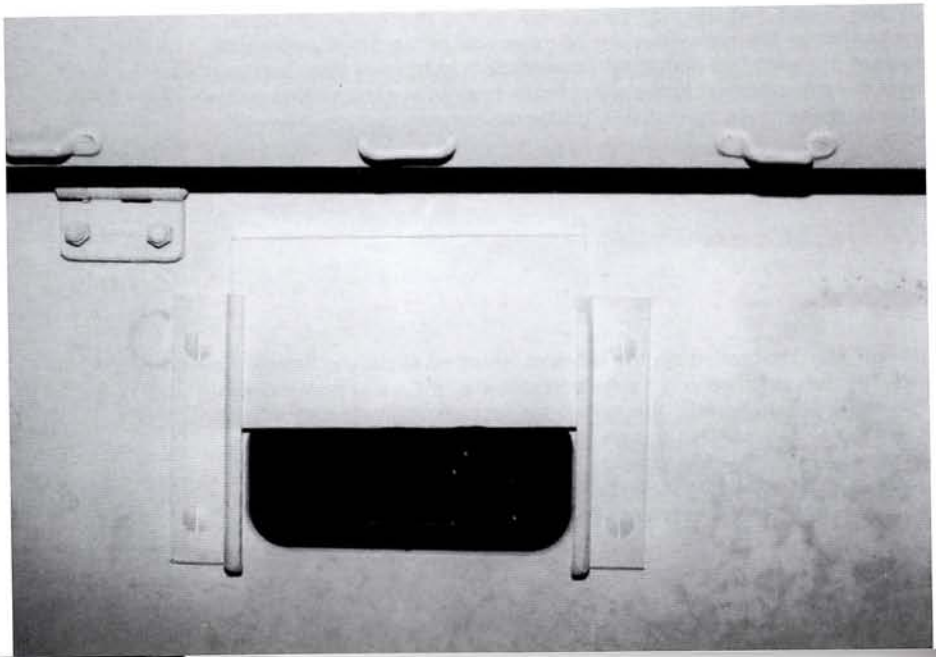
A folding armor shield was fitted to the front of the driver's compartment. Three hinges attached this shield to the upper windshield framing. Three steel rods (the far rod is unseen here) held the shield in position when it was deployed in the up position. This shield was 0.5-inch (13MM) thick, compared to the 0.25-inch (6MM) thick armor of the rest of the vehicle. (Ward)

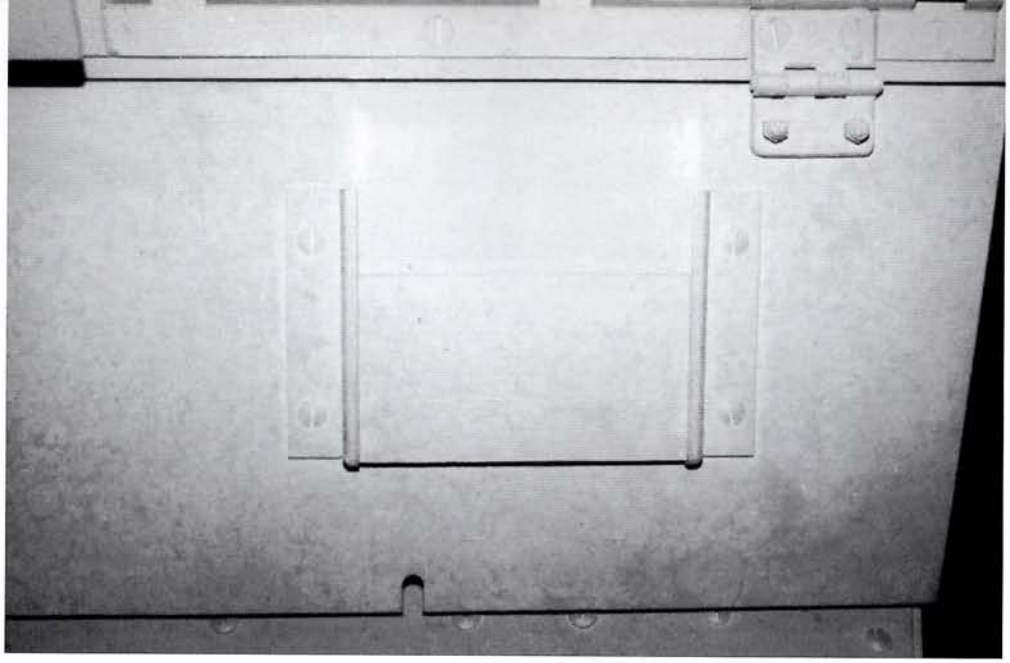
Placing the armor plate in the upright position allowed for excellent visibility from within the driver's compartment. Shatterproof glass was used for the windshield. The driver's compartment interior was painted Olive Drab. (Ward)

Two small rectangular vision slots provided vision when the armor plate was lowered over the windshield. Armored flaps covering each slot were raised or lowered using a small turn screw and the opening could be adjusted accordingly for the amount of vision the driver required.



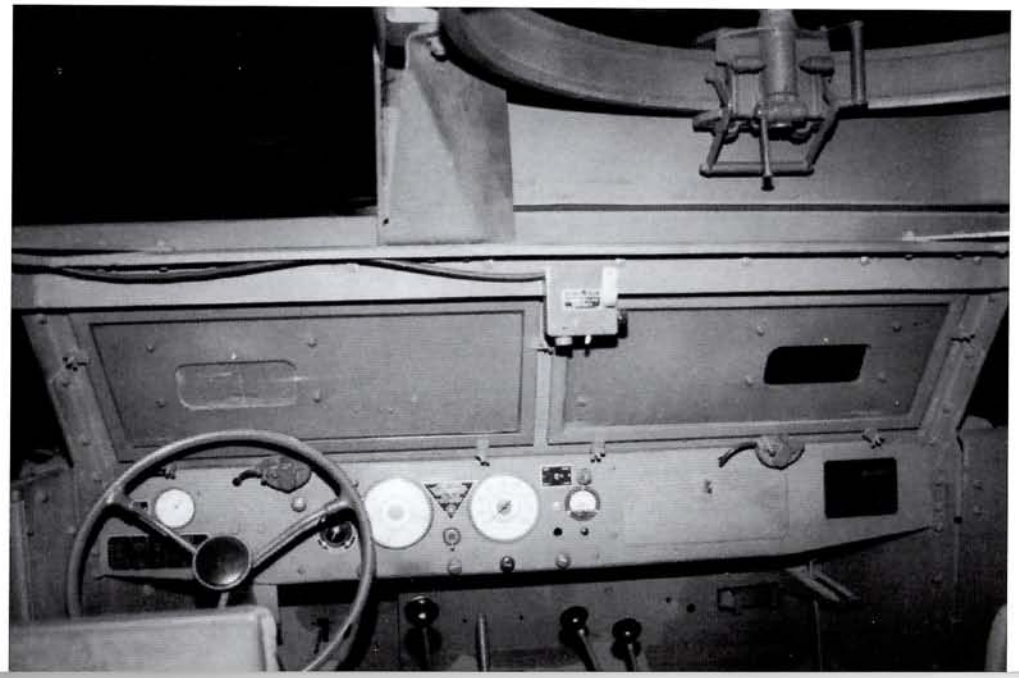
Each armored flap slid up and down in a small channel bolted onto the armored shield. This flap is placed in the up position to allow for viewing from inside the driver's compartment.

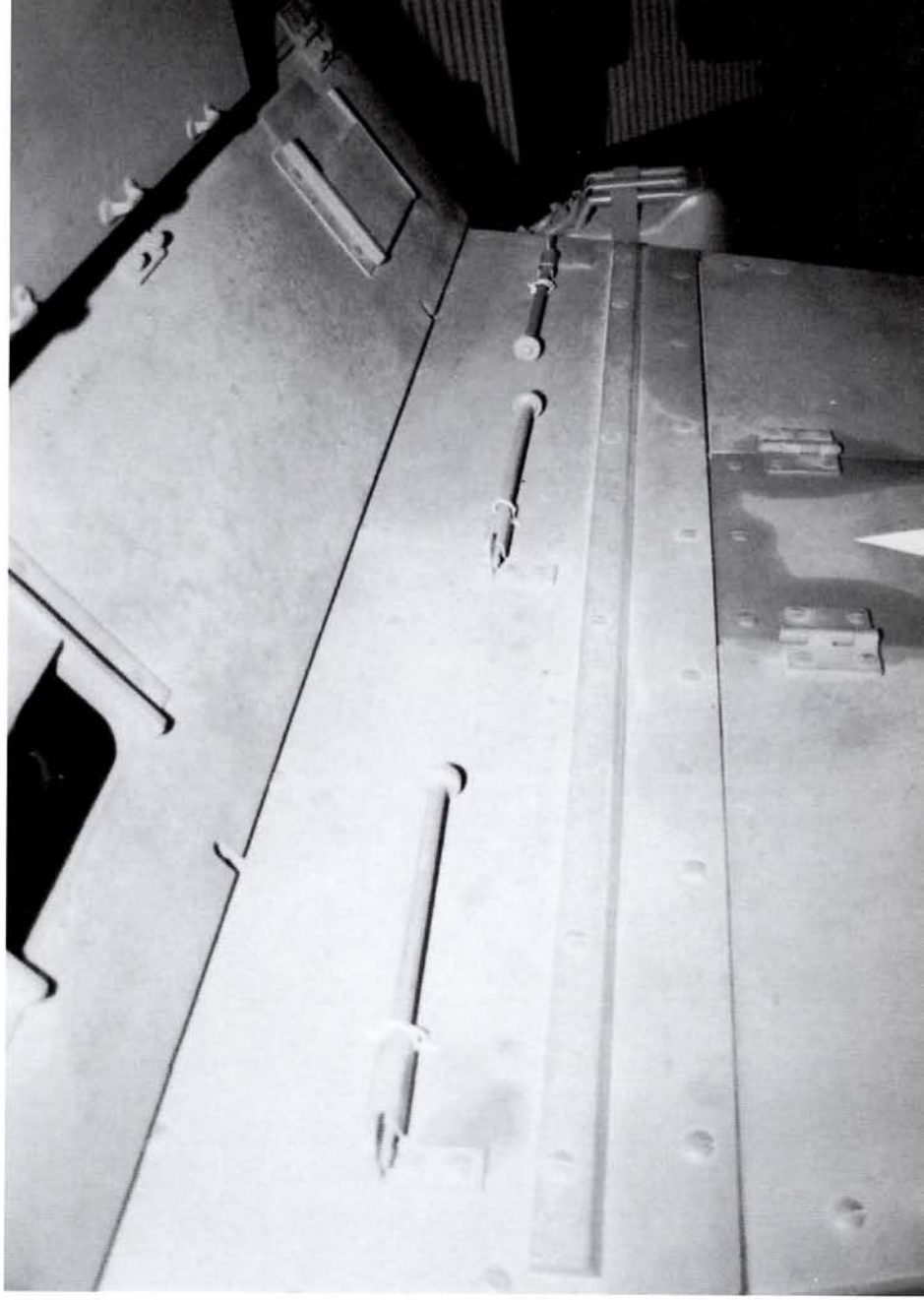




This flap is lowered over the vision slot to provide maximum protection from projectiles and shrapnel. The entire armored plate was hinged and normally was raised or lowered by two men, although it was possible for one man to accomplish this task.

Visibility from within the driver's compartment was extremely limited when the armor shield was lowered over the windshield. Neither the M2 nor the M3 were designed for making direct assaults on enemy positions. Their armor plating was more for protection against shrapnel and occasional small arms fire.



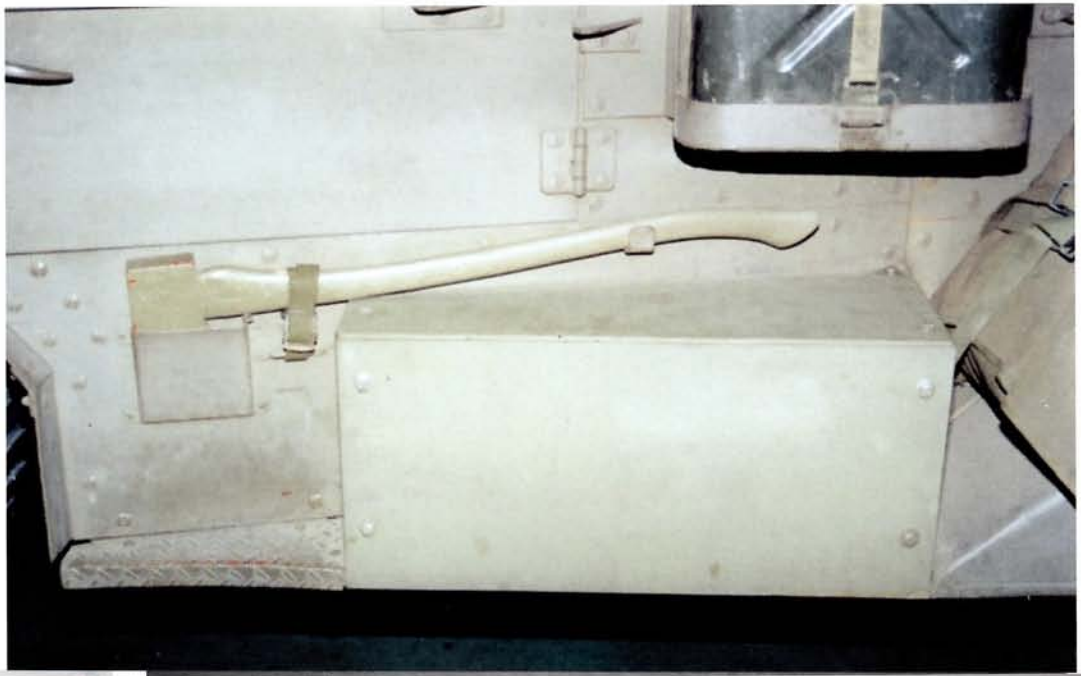


The three supporting rods rested on the engine compartment when the armor plate was lowered over the windshield. A sliding sleeve on the bottom of each rod held it in place when the rod was in the upright position. These rods were swiveled upward to hold up the plate when it was deployed in the open position. Each rod fit into three indentations located in the armor plate.

A holder for a 5-gallon (19 L) jerry can was located on each side of the engine compartment. An adjustable canvas strap held the can to the holder. Attached to this can is a collapsible canvas bucket that was widely used in the field. A pair of canvas straps on the right fender secures a camouflage net.

The right side of the M2/M3 driver's compartment differed only slightly from the left side. The main difference was the battery box located on the running board and the axe stowage. A troop compartment cover is secured to the fender and a jerry can to its holder. (Ward)

A sheet metal sleeve secured the axe head in place, while the handle rested on an L-shaped bracket. A small canvas strap near the axe head held the axe in place. The battery box underneath it was made of 0.25-inch (6MM) armor plate. (Ward)



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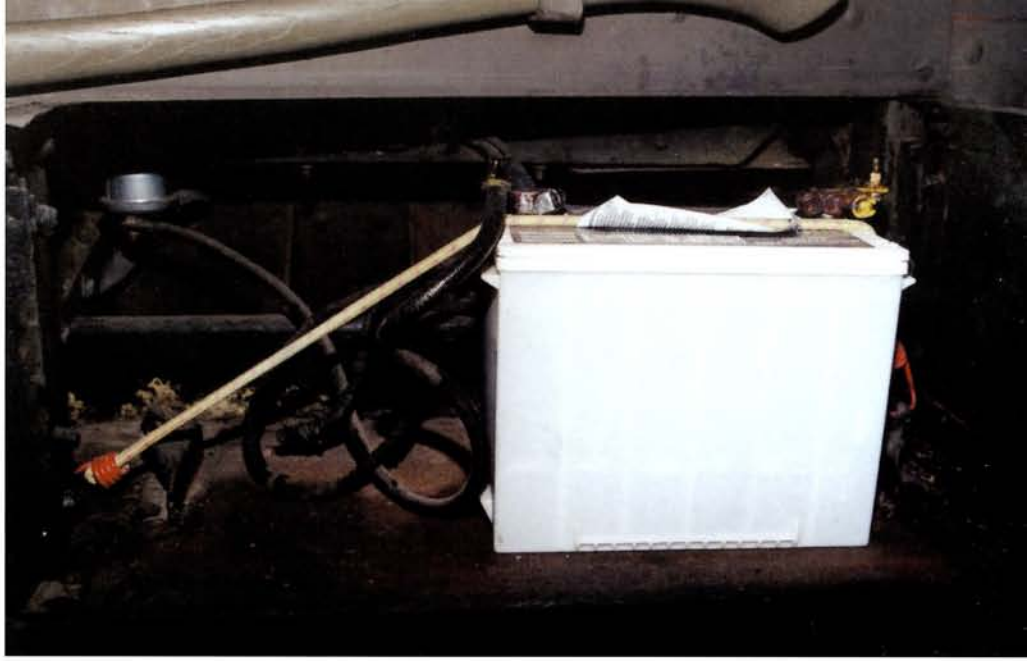
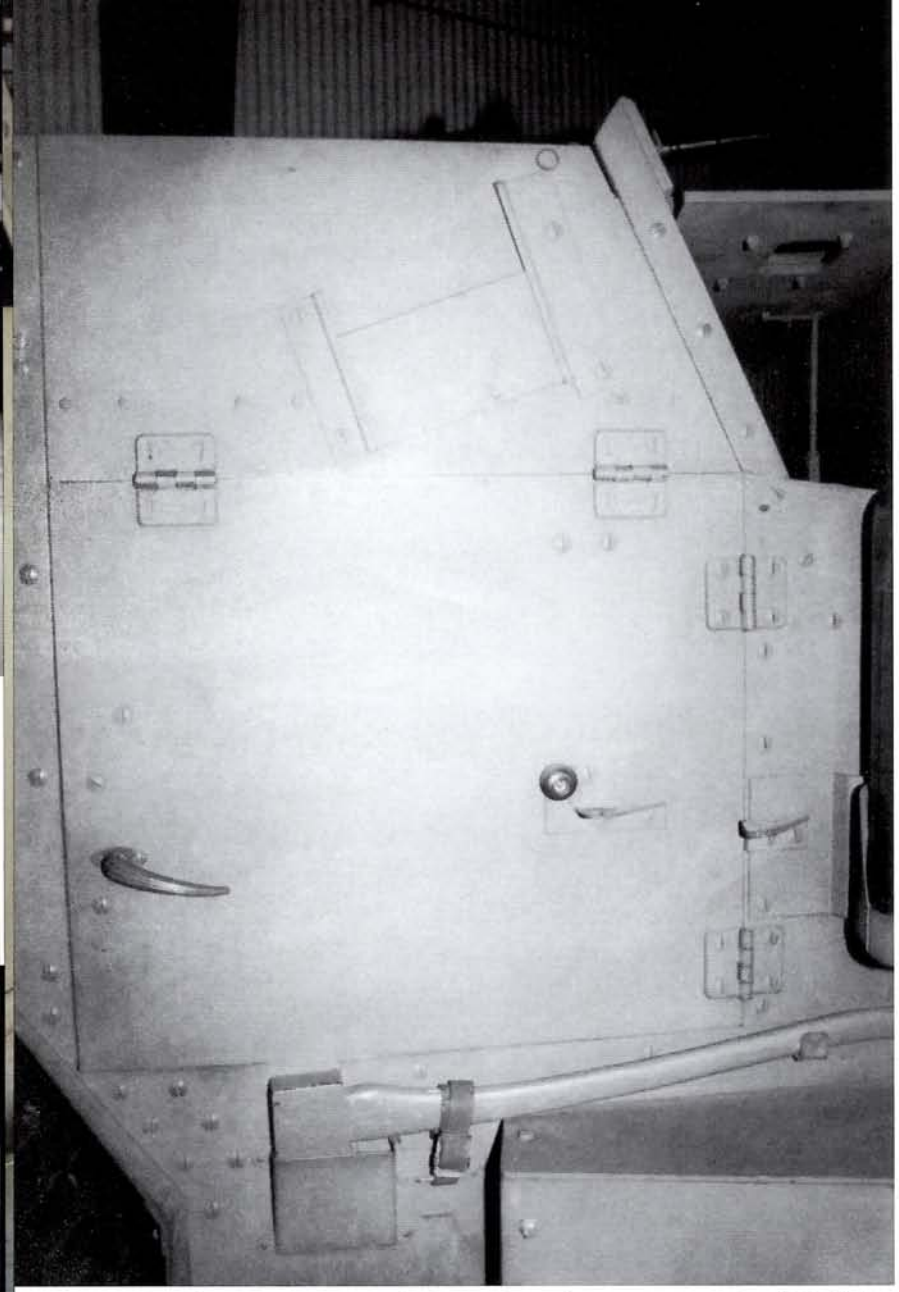


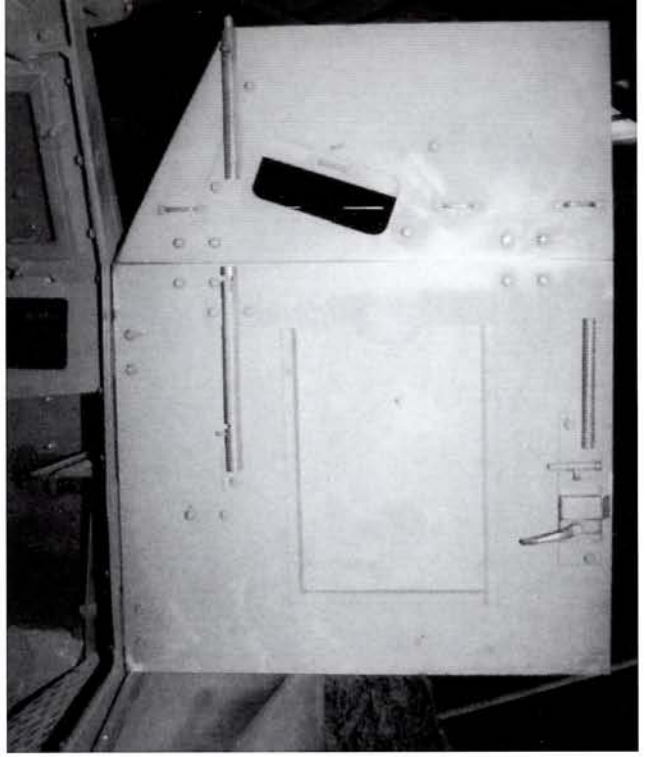
(Above) The M2/M3's battery box held a Willard six-cell, 12-volt battery during World War Two. Each cell contained 25 plates and generated two volts. Electricity stored in this battery was used for the engine starter, lights, and radio equipment. It was continually recharged during engine operation. The nickel placed on the side armor plate's lip helps illustrate the armor's thickness. This restored vehicle uses a more modern battery, for obvious reasons. (Ward)

(Above Right) The battery box's outboard side was removable for easy access to this compartment. Part of the battery compartment extended under the driver's position. (Ward)

(Right) The left side of the driver's compartment was similar to the right, except for tool storage and the battery box. A pickaxe and shovel are mounted just under the driver's door. Each tool had its own holder and was secured in place using a canvas-retaining strap. Both the pickaxe and the shovel are painted Olive Drab to match the vehicle's external finish. A 5-gallon jerry can is secured to its holder in front of the door. (Ward)

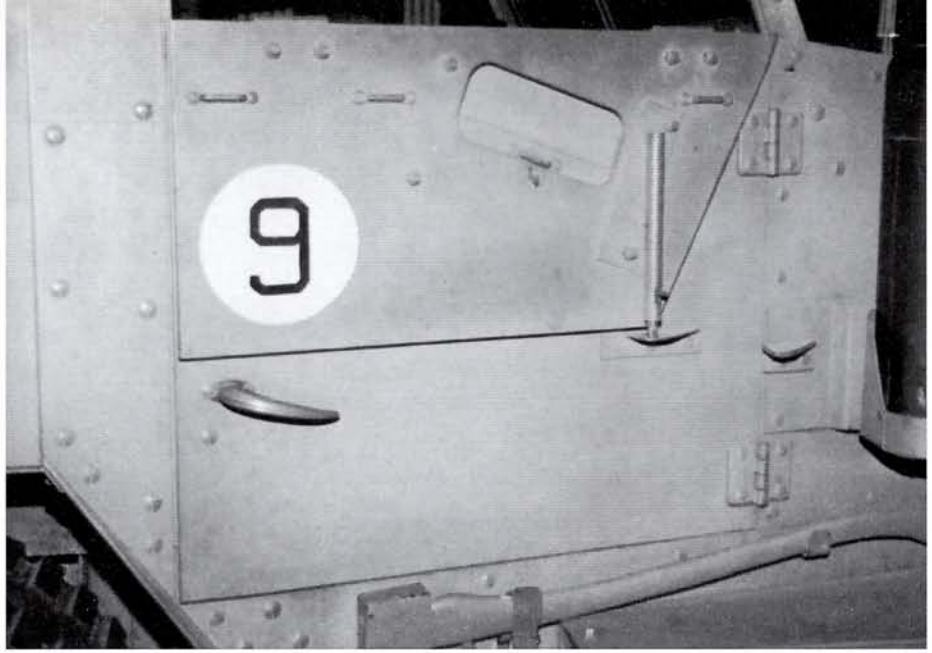


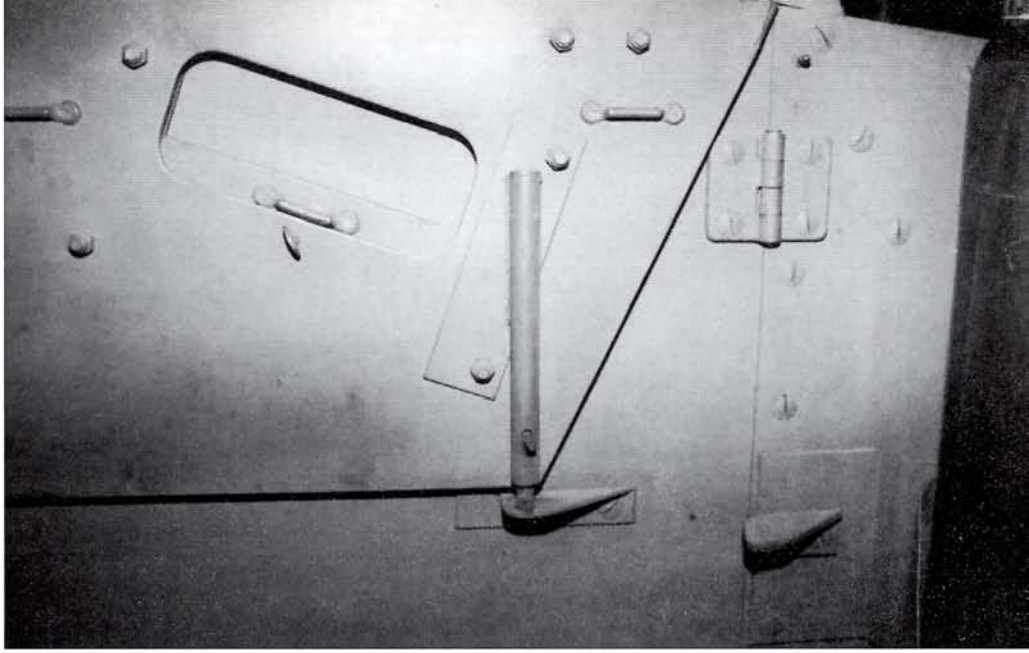
The driver's compartment had two doors for crew entry and exit. Both the left and right doors were mirror images of one another. The upper portion of each door was hinged to fold outward and down to help increase visibility. The upper flap was cushioned when lowered by a small circular rubber stopper on the door. This prevented the flap from banging against the door. (Ward)



Fittings on the inside of the door held the upper portion in place along with the door latch mechanism. A small sliding flap is mounted to a vision slit cut into the door's upper hinged section. The crewman slid this flap up to open this slit, which gave a limited view when the upper door section was raised. (Ward)

The 5-gallon jerry can is mounted immediately forward of the two large door hinges. The small flange just above the bottom hinge is a door stop. This stop prevented the door from opening more the half way. (Ward)

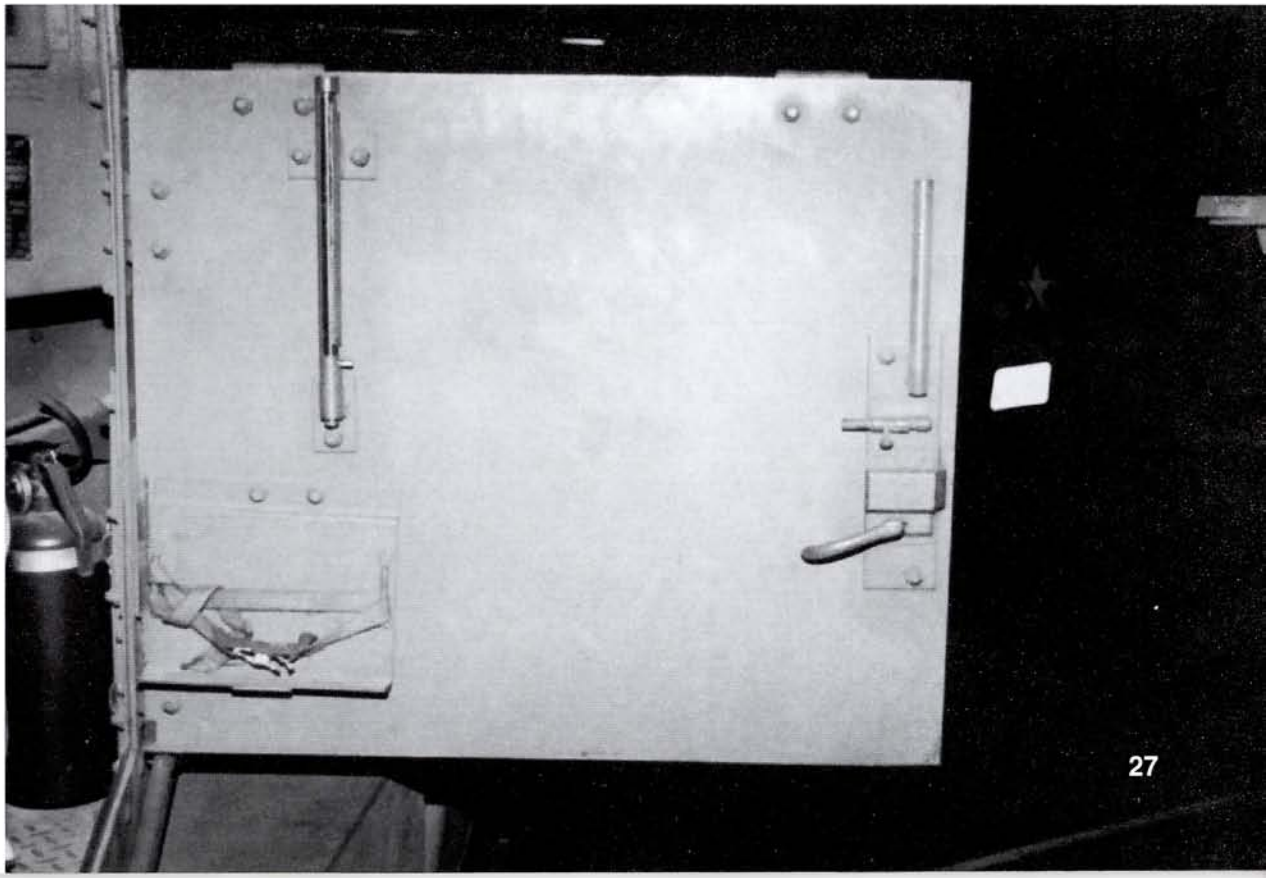




(Above) The driver's compartment upper door flap rested against the lower door's side when it was lowered. Visibility from the driver's compartment was excellent when the door flap was in this position. The Black numeral 9 painted on an Orange-Yellow (FS33538) circle on the door indicated the vehicle's approximate weight – nine tons (8.2 MT). (Ward)

(Above Right) A small bolt was extended down into the flange on the door's side to hold the upper flap in place. The small sliding flap was held in place by a little turn screw. This flap was slid either open or closed when the screw was loosened and held in place by tightening the screw. (Ward)

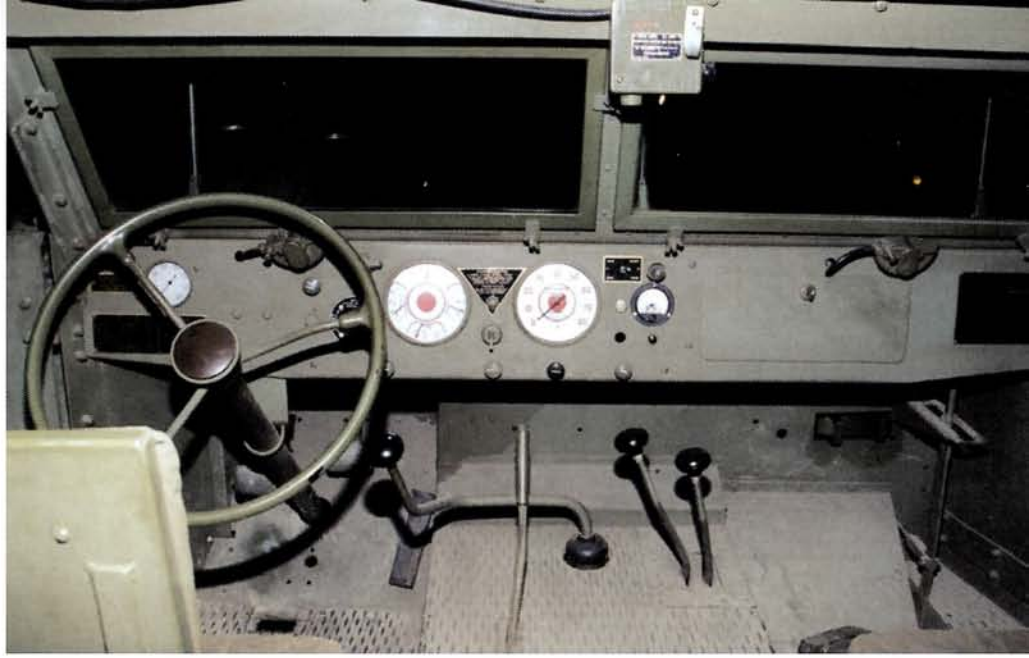
(Right) The doors on both the M2 and M3 were identical aside from small fittings. A small holder is bolted to the lower inboard corner of the M4 Mortar Carrier's right door. This held maps used by the passenger seated beside the driver. A 2-pound (0.9 KG) Carbon Dioxide (CO_2) fire extinguisher is mounted in the passenger compartment beside the door hinge. (Ward)



(Above Left) A large metal map holding pocket was bolted to the passenger's door of this M3. This kept maps organized, yet within easy reach of the passenger seated beside the driver. The bolt used to secure the door's upper flap is mounted to the left of the map pocket, while the door latch and locking bolt are placed to the right. (Ward)

(Above) The driver's door was generally a mirror image of the passenger's door, but it lacked the map holding pocket. The door handle activated a small wedge shaped bolt that held the door shut when extended. Above it is the latch used to bolt the door shut from the inside. (Ward)

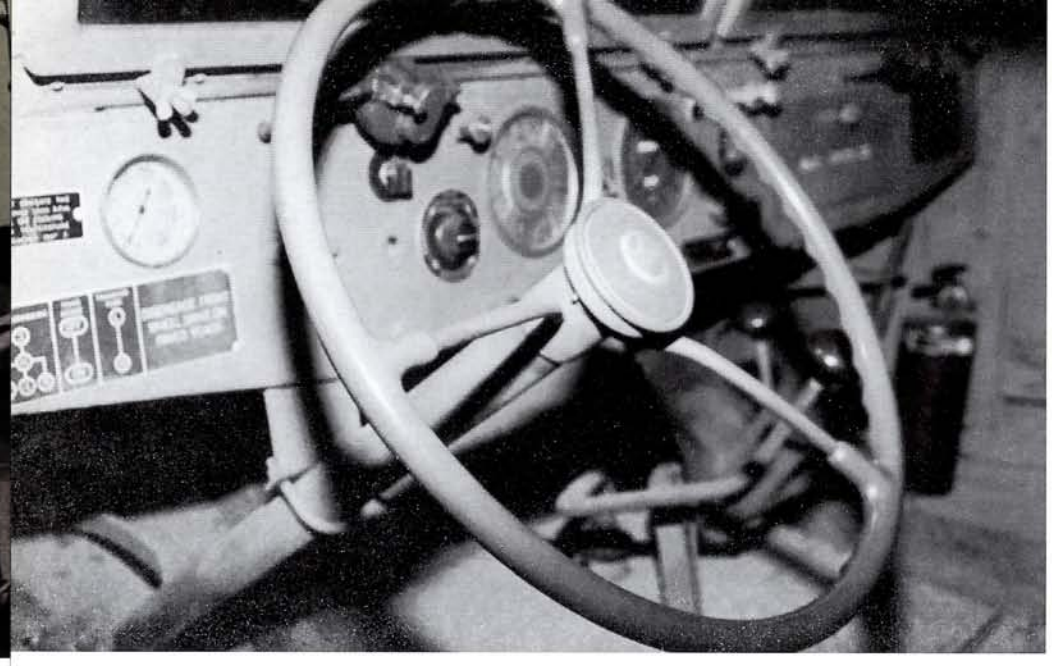
(Left) The M2, M3, and their variants featured rounded, automotive-style fenders. The M5 and M9 had flat stamped fenders. The service identification (U.S.A.; United States Army) and the registration number (W-4015592) are both painted in 3-inch (7.6 cm) high Blue Drab (approximately FS35250) letters. The US Army adopted Blue Drab for registration numbers and other small markings during 1942. This color was considered less conspicuous than the Insignia White (FS37875) used prior to that time, although Insignia White was more common during the war. The registration number's W prefix stood for the War Department, while registration numbers for half-tracked vehicles began with 40. The W prefix was deleted from many vehicles fairly early in World War Two.

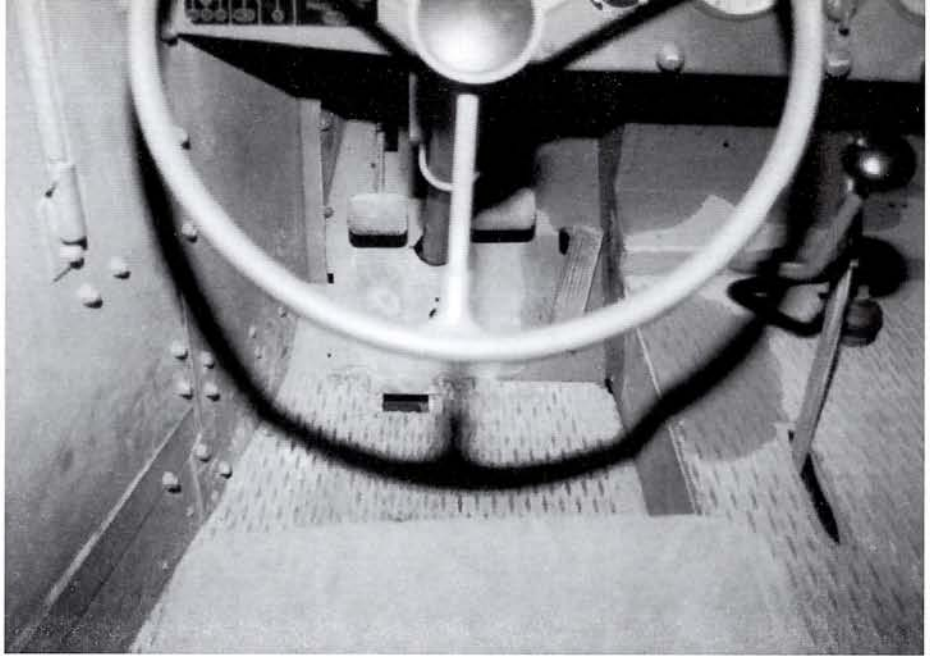


(Above) The overall interior of the various M2 and M3 versions were nearly identical to each other, except for minor fittings. This M2 has a Black plastic steering wheel. Black plastic was also used for the lever knobs. Overall driver's compartment interiors were Olive Drab (FS34087). Floor panels were made from non-skid metal sheeting. (Green)

(Above Right) A small intercom box is mounted on the M3's upper windshield ledge. This controlled the intercom that allowed the driver's compartment crew to communicate with troops in the troop compartment aft. This vehicle has an Olive Drab steering wheel, with a Black hub. (Ward)

(Right) Three 200-round .50 caliber (12.7MM) ammunition cans are placed immediately aft of the driver's compartment seats of this M16 Multiple Gun Motor Carriage. This M3 variant carried up to 25 cans to feed the four turret-mounted M2HB machine guns in the troop compartment. (Ward)

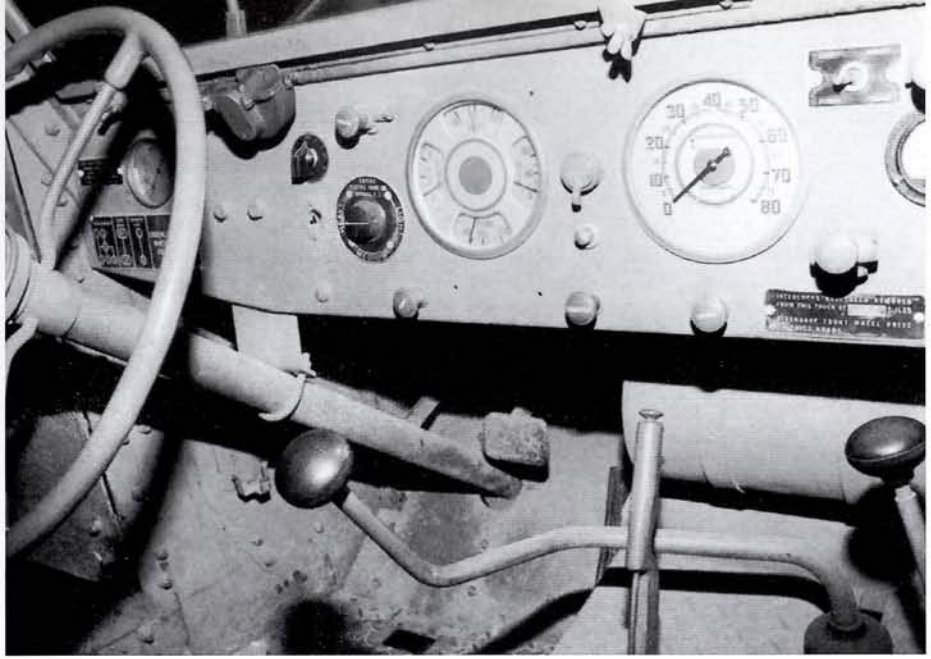




(Above Left) The steering wheel was made of high impact plastic fitted to metal supports, which attached this wheel to the steering column. Ridges along the handle allowed the driver to grip the wheel more securely. The vehicle's horn located in the steering wheel's center. (Ward)

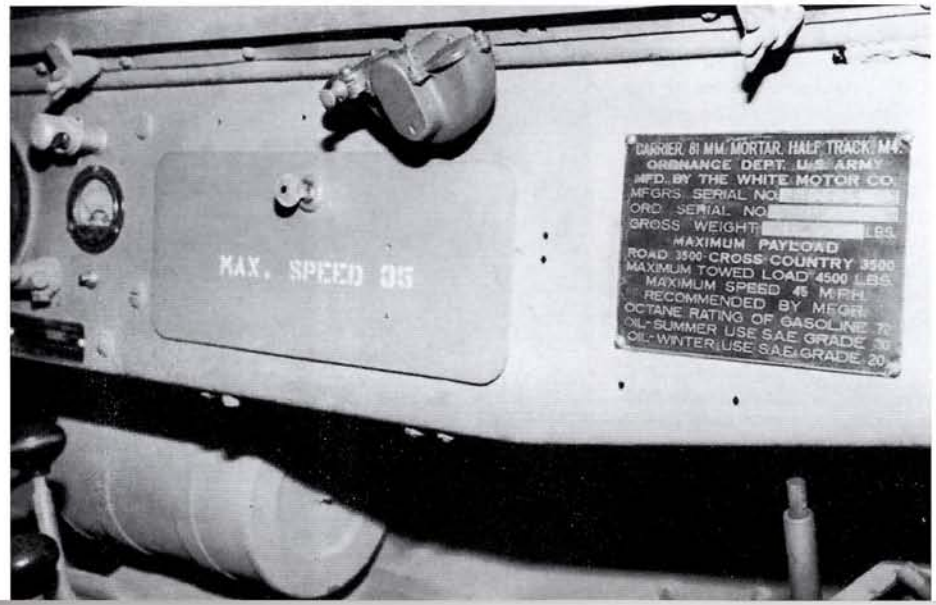
(Above) The clutch (left), brake, and gas pedals were mounted on the floor near the steering column's base. The driver engaged the clutch when shifting gears on the manual transmission. This was done in conjunction with the gearshift lever to the right of his seat. He stopped the vehicle using the brake pedal, while stepping on the accelerator (gas) pedal increased its speed.

(Left) The handbrake lever was mounted on the floor just right of the gas pedal. Immediately aft of this is the transmission shift lever. The two levers near the passenger's side are the transfer case shift lever (left) and the front drive shift lever. The former lever adjusts the transfer case, which shifts the transmission from high speeds for road travel to lower speeds for off-road travel. The front drive shift lever adjusts the transmission through any of four forward speeds. (Ward)



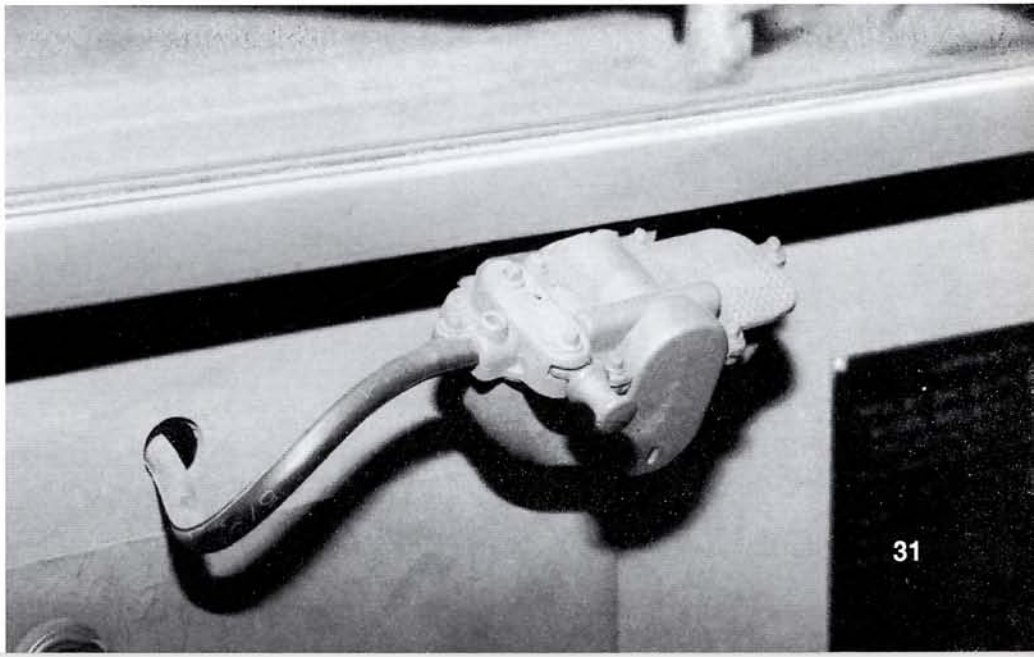
The main engine and electrical system instruments are mounted on the dashboard in front of the driver. Immediately right of these instruments is the speedometer, which has a limit of 80 MPH (129 KMH). The driver's windshield wiper driver unit is mounted on the upper dashboard immediately in front of the steering wheel.

The glove compartment door is located in front of the passenger's seat. MAX. SPEED 35 is stenciled in white on this door and referred to a 35 MPH (56 KMH) speed limit; however, the nearby black metal panel gives the maximum speed as 45 MPH (72 KMH). Another windshield wiper drive unit is located above the glove compartment door. The black metal identification plate on this panel included the vehicle's serial number and pertinent data related to the vehicle. (Ward)


MAX. SPEED 35
CARRIER, 81 MM. MORTAR, HALF TRACK, M4
ORDNANCE DEPT. U.S. ARMY
MFD. BY THE WHITE MOTOR CO.
MFGRS. SERIAL NO.
ORD. SERIAL NO.
GROSS WEIGHT LBS.
MAXIMUM PAYLOAD
ROAD 3500-CROSS COUNTRY 3500
MAXIMUM TOWED LOAD 4500 LBS.
MAXIMUM SPEED 45 M.P.H.
RECOMMENDED BY MFGR.
OCTANE RATING OF GASOLINE 70
OIL-SUMMER USE SAE GRADE 30
OIL-WINTER USE SAE GRADE 20

The cylindrical generator filter is mounted to the firewall underneath the dashboard. The generator supplied electrical power for various items on the vehicle, including lights and the radio. (Ward)

M2s and M3s were equipped with two vacuum-type windshield wipers. Each wiper had an aluminum die-cast drive unit mounted immediately under the windshield. This housed the wiper's vacuum-operated drive. A small wiper control knob extended from the unit's left side. (Ward)



The driver sat to the left and a passenger to the right inside the driver's compartment doors. Another seat was sometimes fitted between these seats, depending upon the specific M2 or M3 variant. A small storage box was mounted just to the left of the driver's seat. (Ward)

The lid is opened on the storage box beside the driver's seat. A small latch held the lid in place. This metal box was used to stow miscellaneous items. (Ward)

The passenger's seat cushion was removed and placed beside the seat. Cushions provided a measure of comfort when seated. These sat on a framed tray, but were not attached to the seat frame. The frame was hinged at the front and could be tilted forward with the seat's upper portion. (Ward)

A 2-pound (0.9 KG) CO_2 fire extinguisher is located just forward of the passenger door. The crew used this to extinguish small fires in the vehicle, usually in the engine compartment. A red and white pressure gauge dial is mounted beside the nozzle assembly. The lever for opening and closing the armored radiator louvers is located beside this extinguisher; however, it is missing the knob atop this bar. Positioning this lever along the horizontal bar determined the angles for the louvers; here, the louvers are fully opened. (Ward)

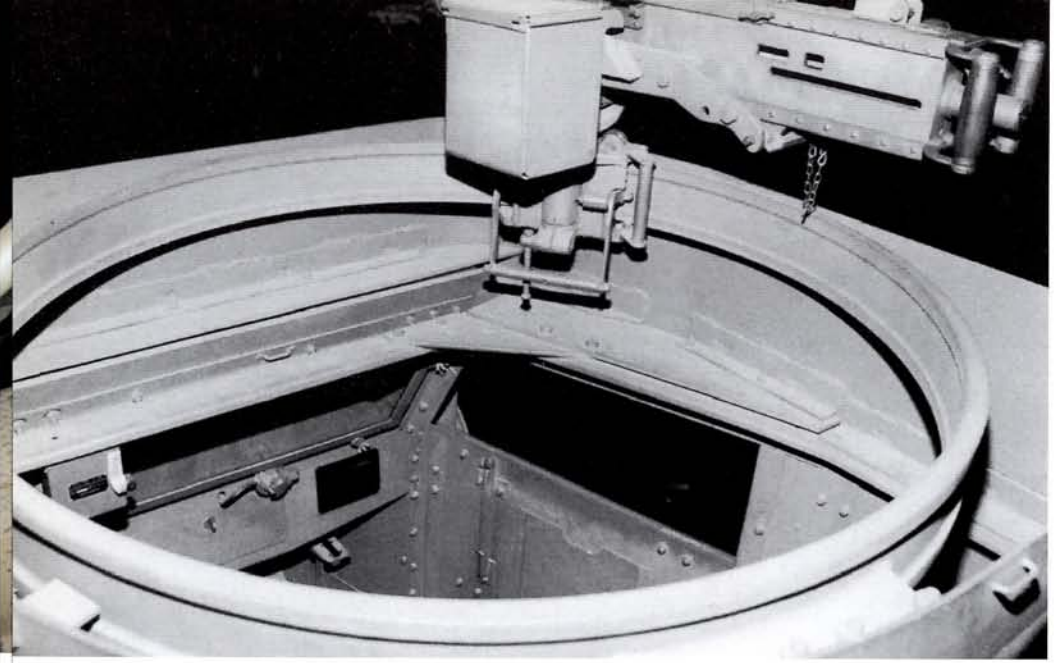
(Above) A .50 caliber (12.7MM) Browning M2HB machine gun is mounted in the M49 armored ring mount. This mount is located over the passenger's side of the driver's compartment. The M49 replaced the M2's skate rail and the M3's pintle mount, after those mounts proved less then satisfactory in combat. (Ward)

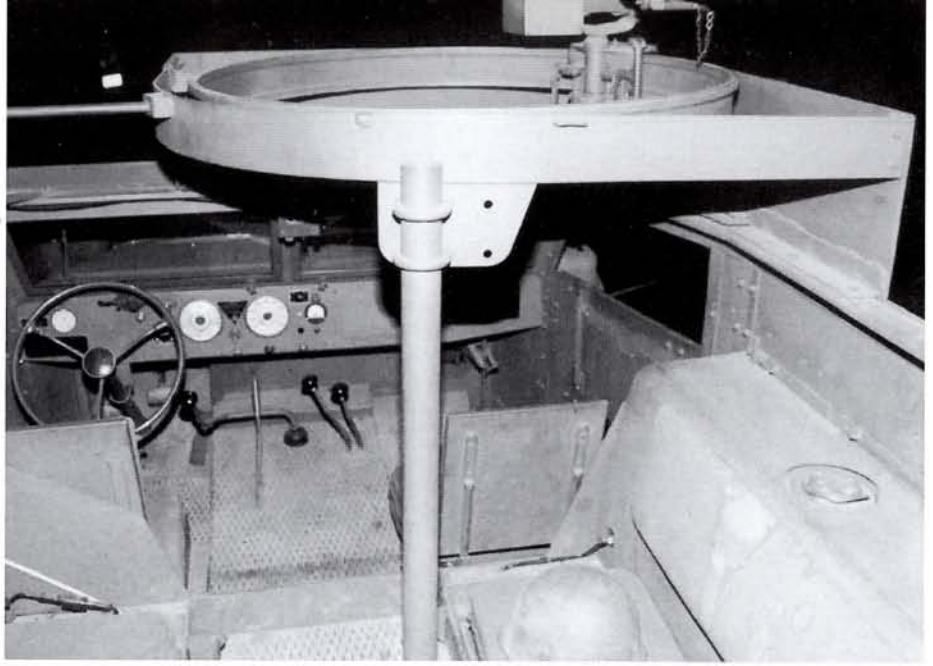
(Above Right) The new M49 ring mount provided a 360° arc of fire from an elevated position with some protection for the gunner. The basic mount was modeled after the M32 ring mount used on trucks. The attachment bracket for the M2HB was the same as that used on the skate rail. (Ward)

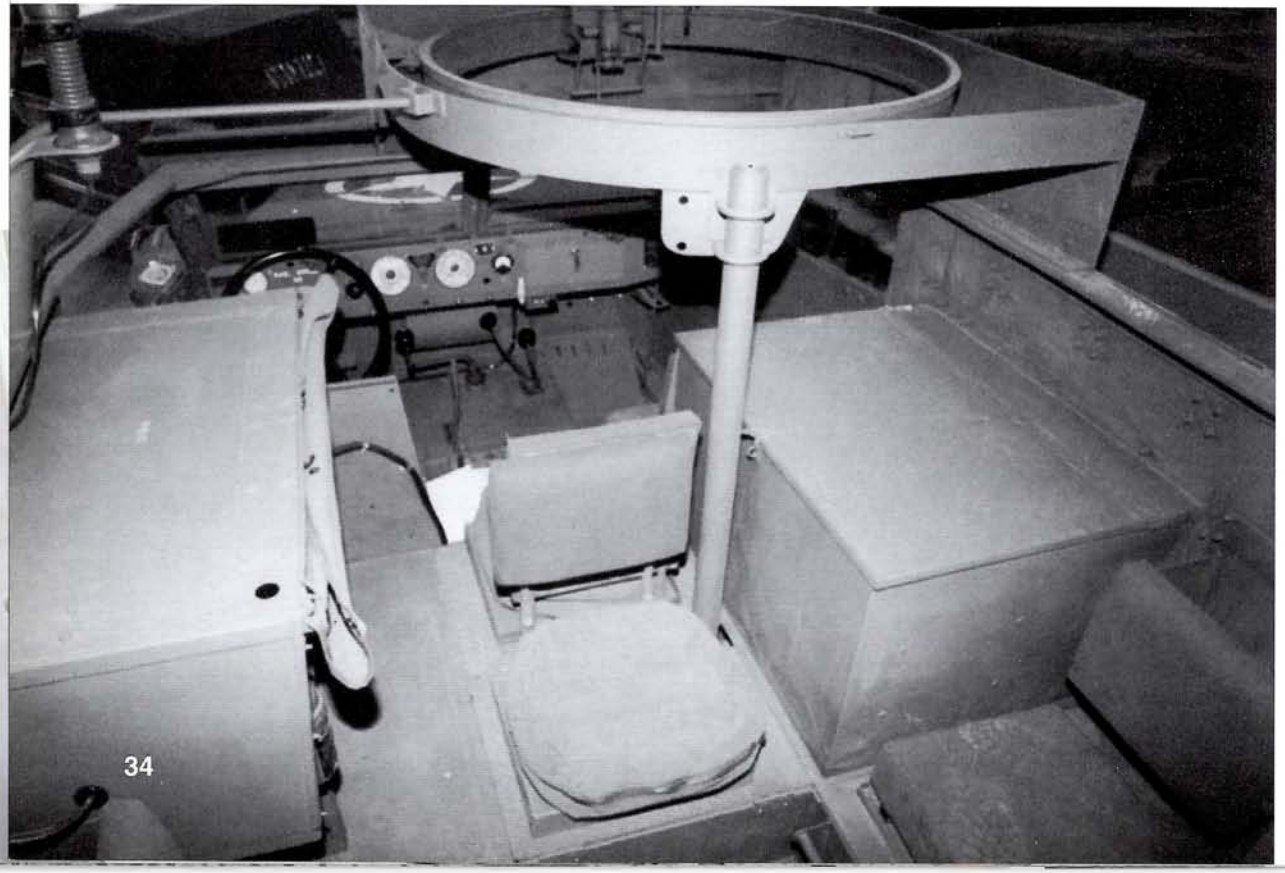
.50 Caliber (12.7MM) Browning M2HB Machine Gun

Overall Length: .....65 inches (165.1 CM)
Barrel Length: .....45 inches (114.3 CM)
Weight (Unloaded): ..84 pounds (38.1 KG)
Magazine: .....110-round metallic link belt
Cyclic Firing Rate: ....450 to 575 rounds per minute
Muzzle Velocity: .....From 2865 feet (873 M) to 2985 feet (910 M) per second, depending upon ammunition.

(Right) This M49 mount on an M2A1 shows how the ring bolted onto the armored box above the right side of the driver's compartment. The three attachment points were each spaced 120° apart. (Ward)



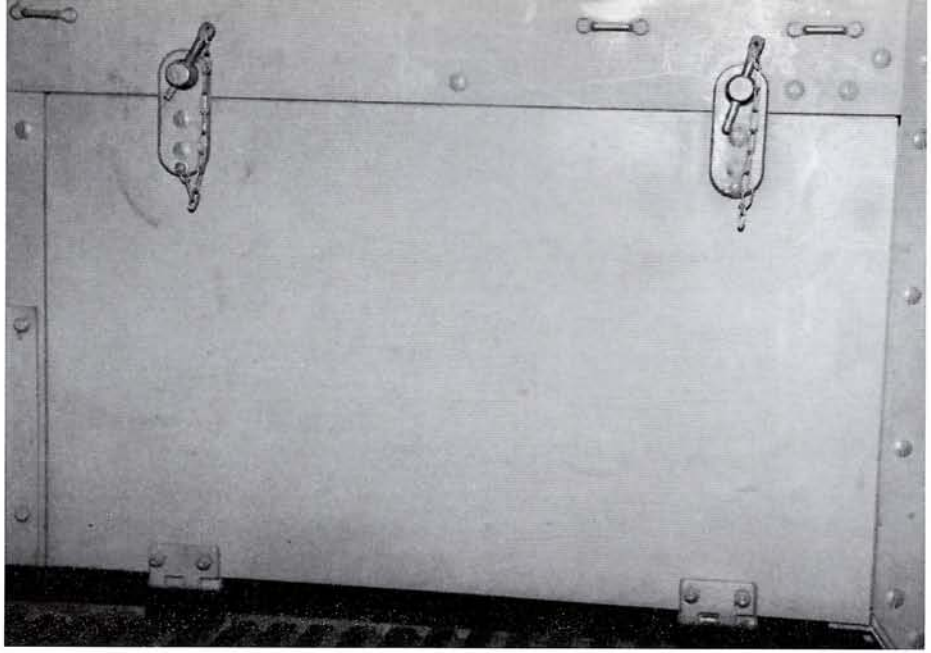




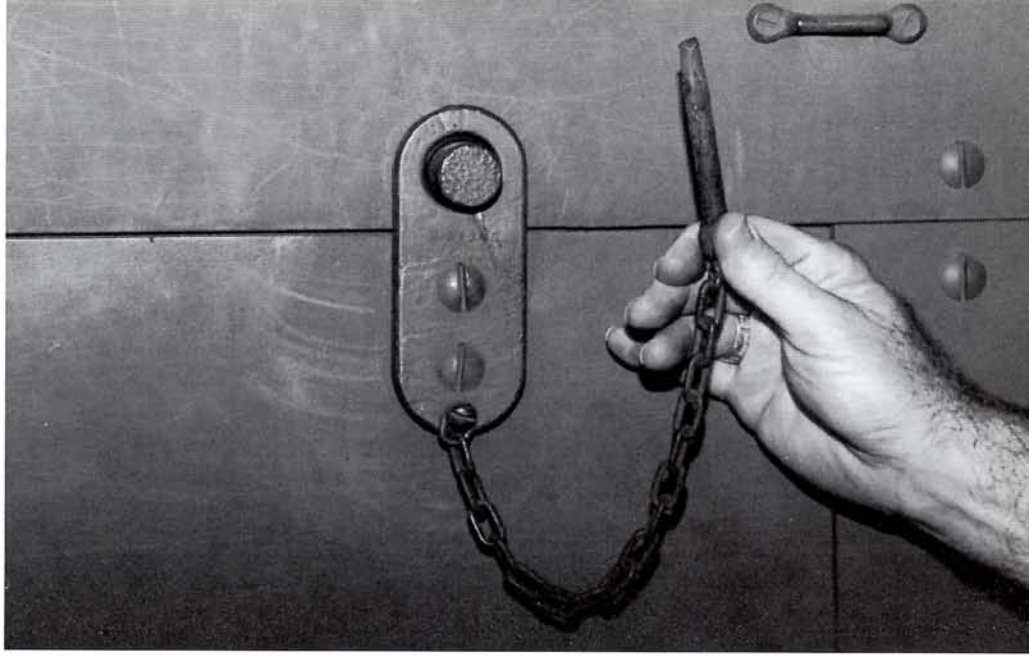
(Above Left) Weld joints on the attachment points appear on the front and right sides of the armored side panels. Attachment bolts for the side panels are located at the bottoms of the brackets. These bolts secured this unit to the half-track's sides. This .50 caliber M2HB machine gun is fitted with the smaller 50-round magazine box, rather than the usual 110-round magazine. (Ward)

(Above) A pole supporting the M49 mount's rear was attached to the mount's side and bolted to the floor. The left and rear sides of the mount extended approximately one-third the depth of the front and side panels. This arrangement facilitated movement to and from the driver's compartment. (Ward)

(Left) The M49 was compatible with both the M2 and M3; however, the mounting bracket at the rear had different bolt attachment holes. This was due to the slight differences in the floor attachment points between these vehicles. The M49 did not require modification for installation in either vehicle. A narrow rod extended from the mount's left side to the antenna post on the left. This rod provided additional support for the M49. A rear-facing passenger seat is located below and slightly aft of the mount. (Ward)

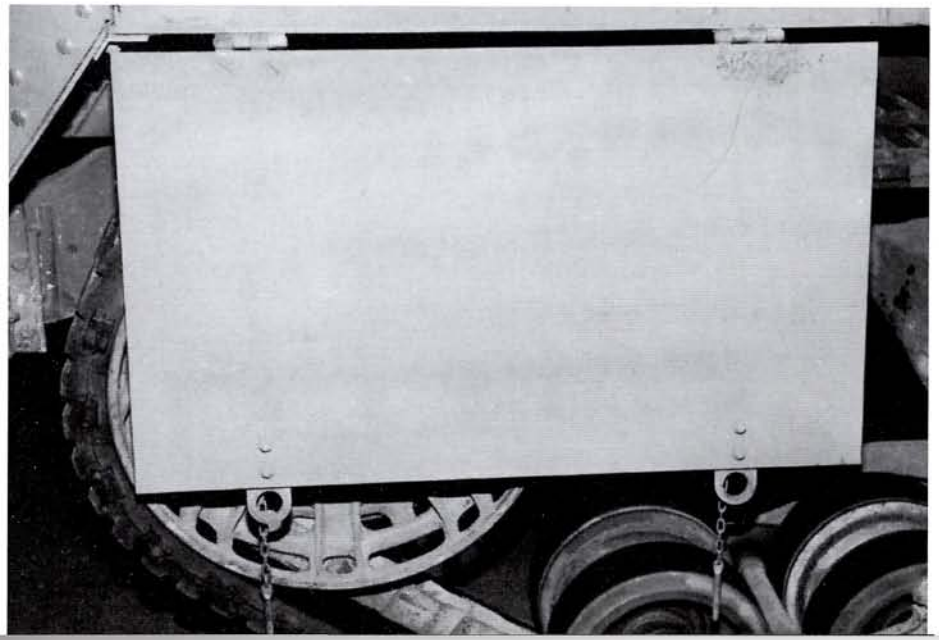


The most visible difference between the M2 and the M3 were the former's large stowage bin doors. These bins were mounted along the sides immediately aft of the driver's compartment. The doors hinged downward and were held in place by two pins on the upper edge. (Ward)

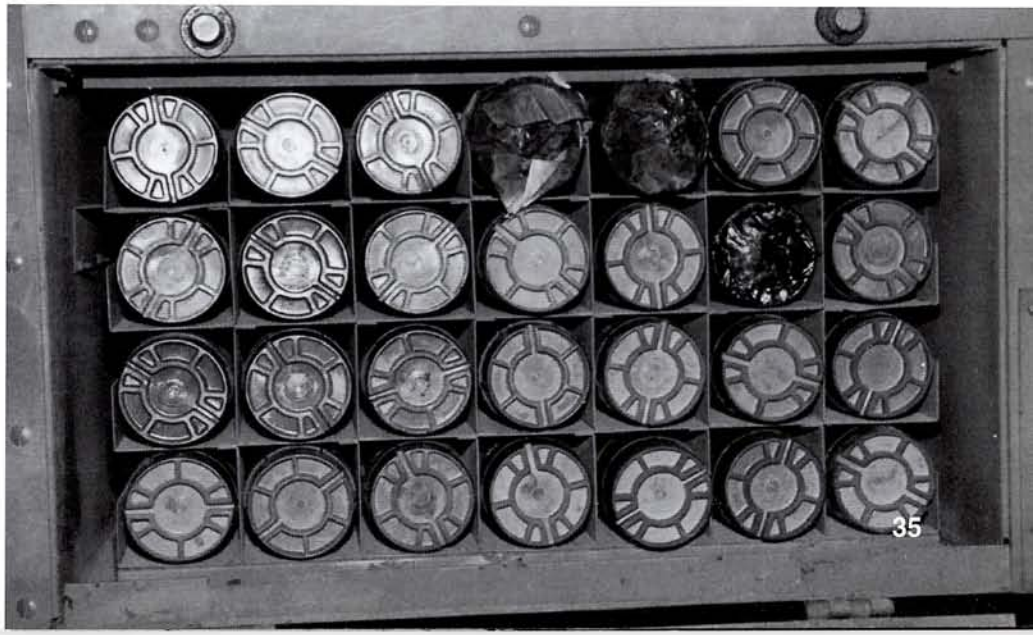


The large pins were secured through a hole in a bolt, which was threaded through the 0.25-inch thick side armor plate. One of these pins is held in the author's hairy hand. It was tapered at the front and had a flattened head where the chain attached. This chain kept the pin with the vehicle. (Ward)

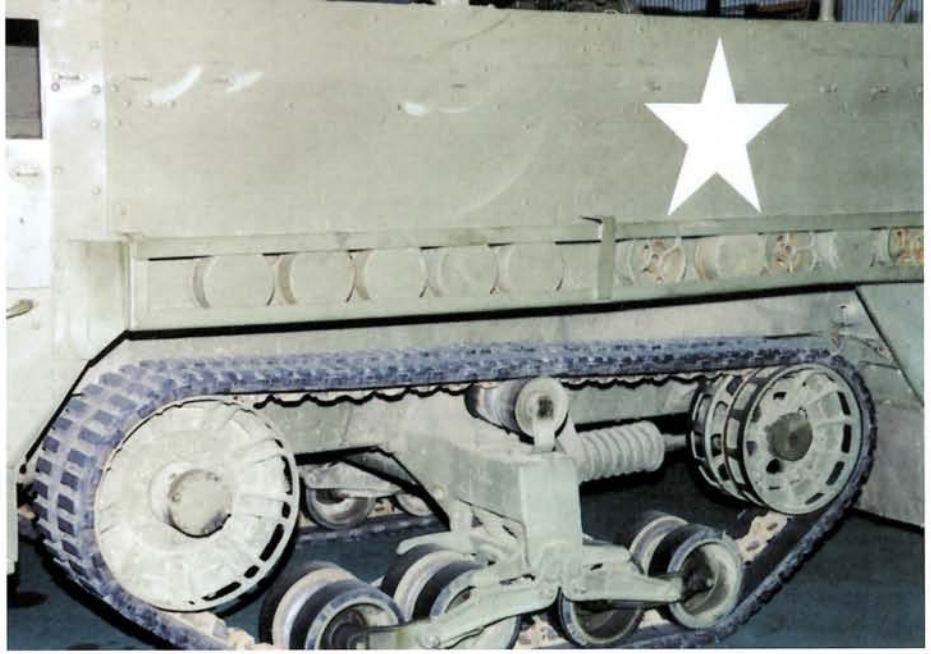
The stowage bin door hung perpendicular to the ground when it was open. This door was the same thickness as the rest of the vehicle's armor plate. (Ward)



Each bin had a series of shelves for holding various items of equipment. The M4 mortar carrier's bin had a series of brackets that held twenty-eight 81MM mortar bomb tubes. These brackets – in both the left and right bins – complemented other mortar round racks located in the troop compartment. Wrappers are fitted to three of these rounds. (Ward)

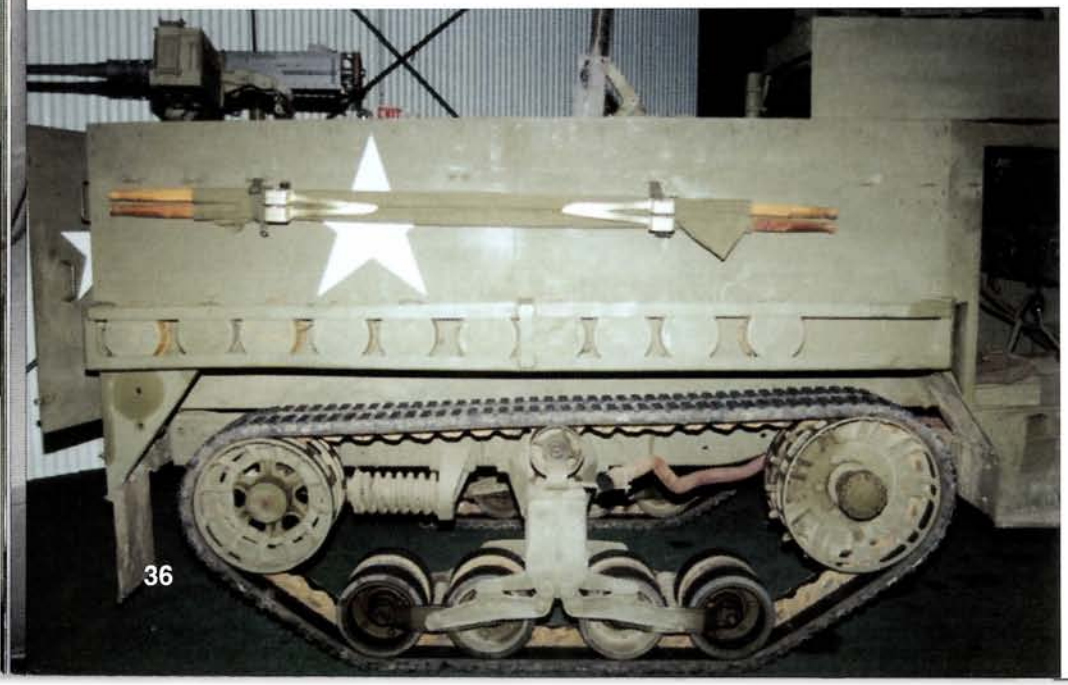


A mine rack was added to the sides of later production M2s and M3s. The M2's stowage bins reduced the size of this rack, which ran from the bin to the vehicle's rear. Four .30 caliber (7.62MM) ammunition boxes are placed inside this rack. (Ward)



Mine racks on M3 series vehicles ran the entire length of the fighting compartment. It was constructed of steel strips welded together and bolted onto the side of the vehicle. Ten anti-vehicle mines are fitted into this vehicle's right side rack. Mines were seldom placed in the racks, due to their vulnerability to enemy fire.

Numerous tie downs were welded to the sides of M2s and M3s to hold additional gear. These were similar to those located on the front fenders. This M3 at the Hubbard Museum carries a folded stretcher on its right side, which is held in place by canvas straps.



The canvas strap was inserted through the tie down and wrapped around the item – here, a stretcher – and secured through its buckle. In combat anything stored in this manner was subject to enemy fire. Normally, personal items were stowed inside the vehicle.

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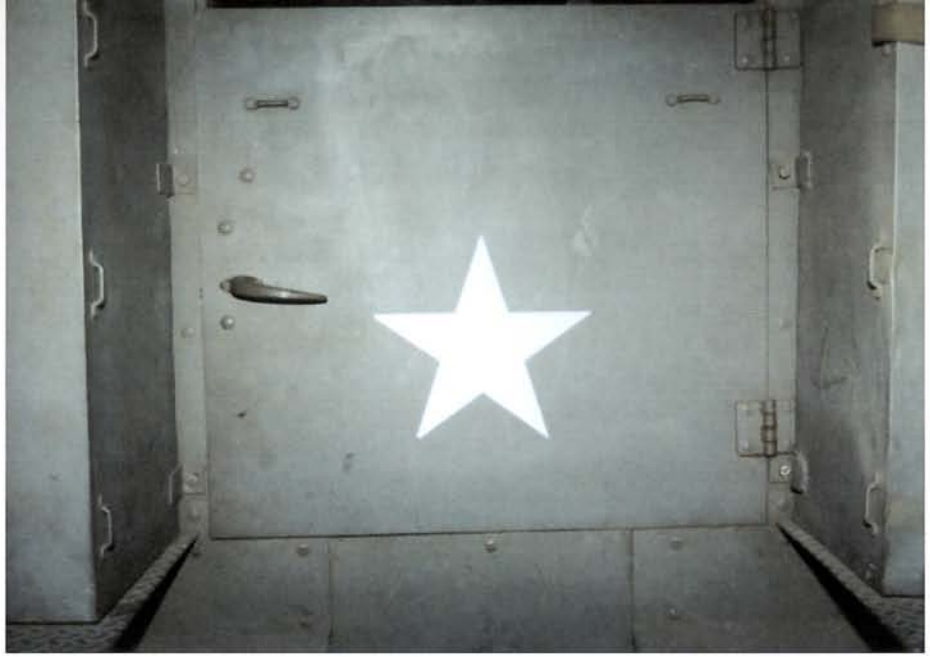
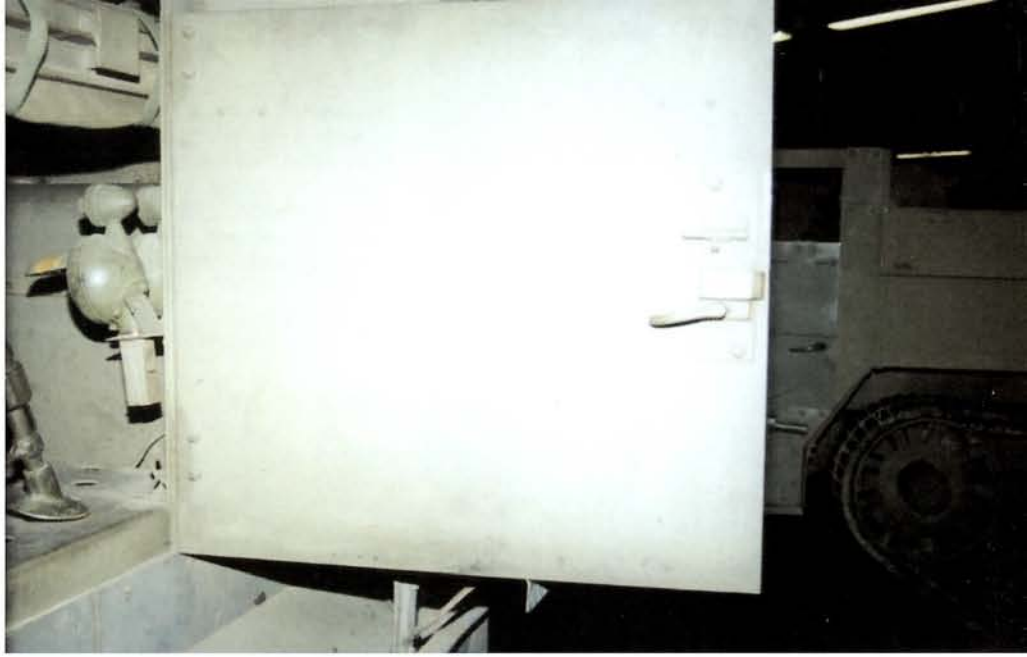


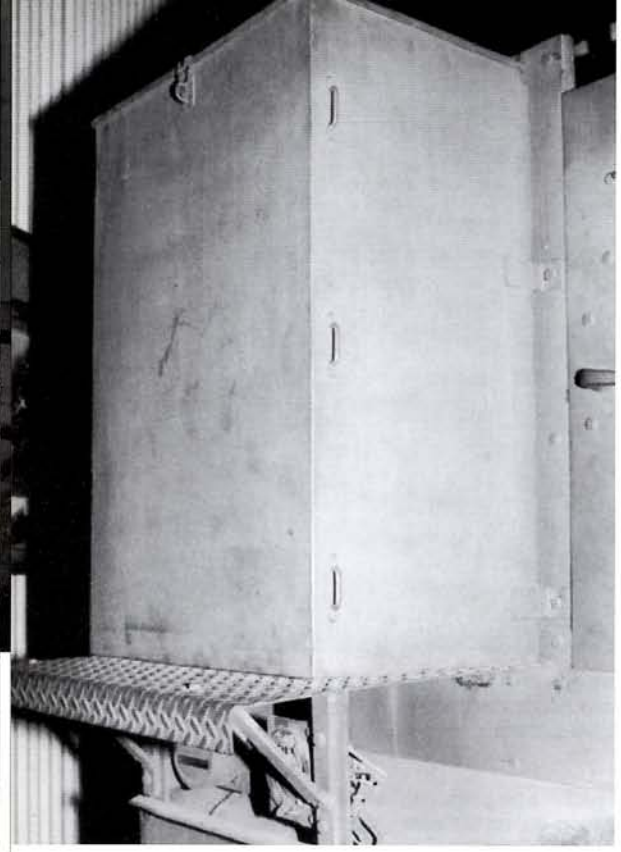
The door at the M4's rear was opened using a regular car-type handle. This handle was turned down to open the door. Two hinges attached this door to the right rear of the M4.



The inner door mechanism on the M4's aft hatch was similar in appearance to those on the driver's compartment doors. The M2 lacked a rear troop compartment door; however, one was fitted in the International Harvester-built M9.

The M3's aft troop compartment door had no fittings on it, unlike the M4 door. It could not be opened from the inside, as there was no handle on the rear wall. Door locking rods are located beside the doorway's left edge.

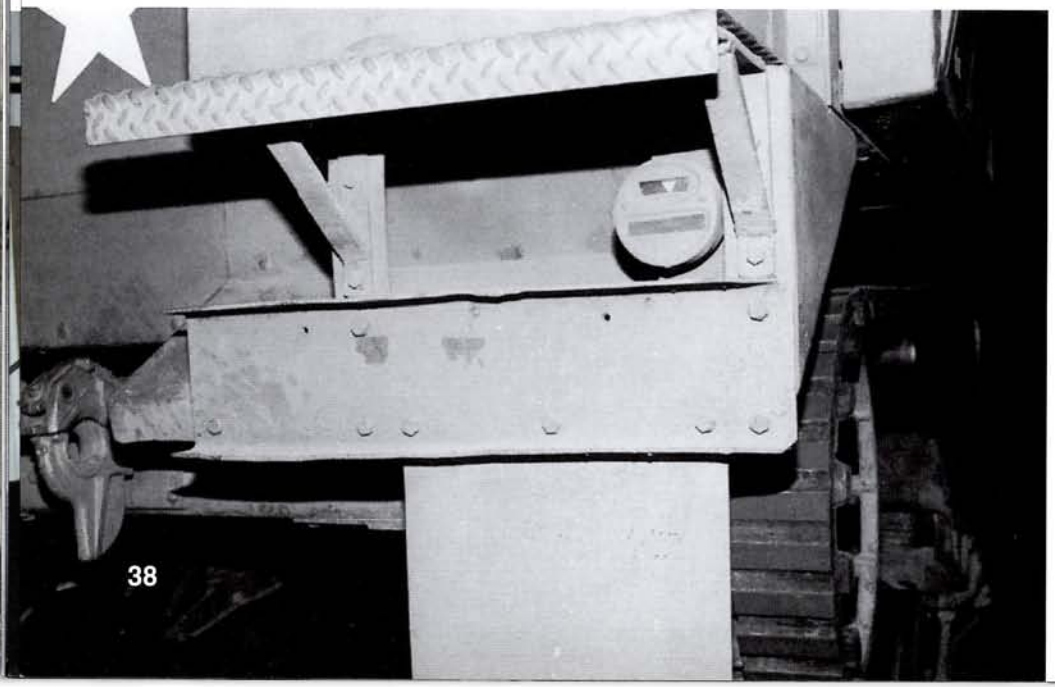
The M3's aft door was narrower and taller than the one mounted on the M4. Turning the handle in the middle counter clockwise opened it. This pulled the rods on its top and bottom out of slots in the door. Both the M5 and M9 had the same type of door. Three hinges secured the door to the right side of the rear wall.



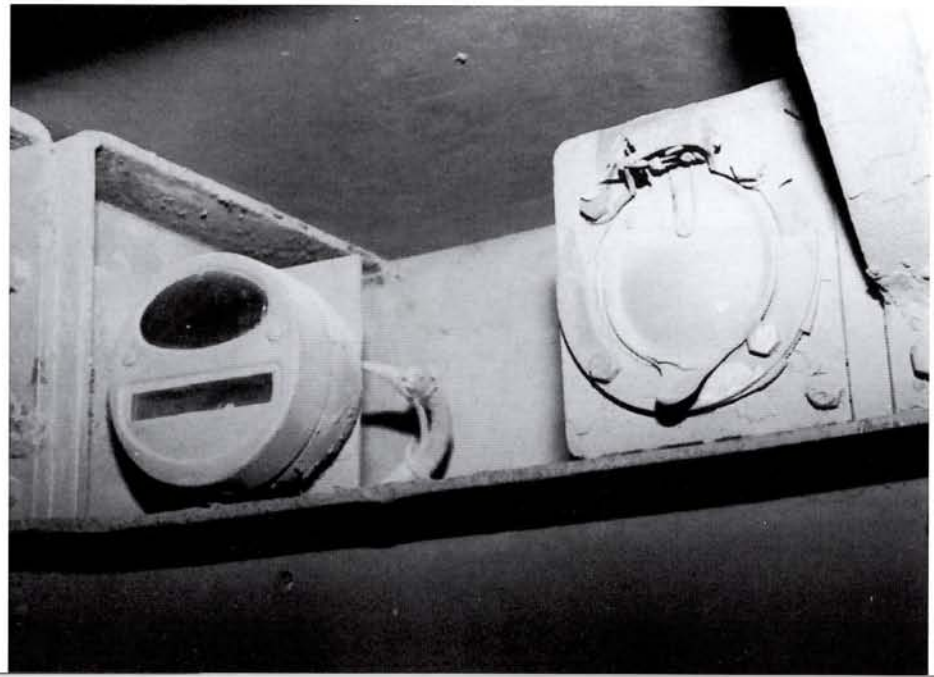
(Left) Two large metal storage boxes were fitted to the M4's rear on either side of the door. They rested on the rear ledge that extended out from the body. The ledge surface was made from anti-skid metal plate and was bolted onto the rear wall with L-shaped brackets. (Ward)

These large boxes were used to store all manner of military and personal gear. They were hinged at the top and folded back toward the fighting compartment. The boxes were made from thin sheet metal, which was not designed to stop bullets or shrapnel. (Ward)

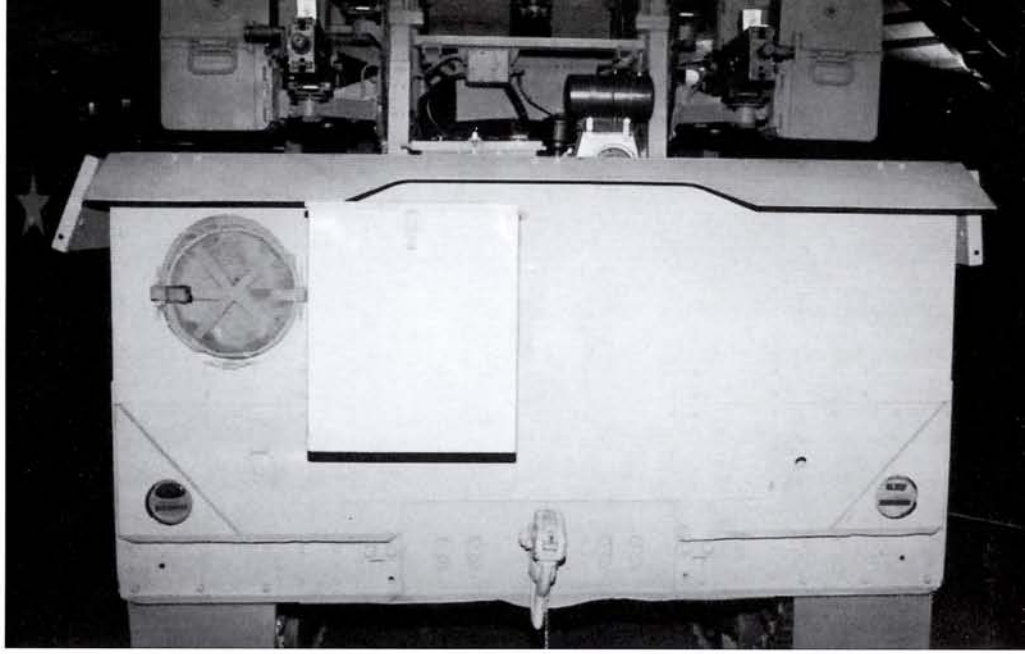
(Below) Red taillights were located under the storage box ledges on all M2 variants. The right side light was a combination marker light (top) and blackout taillight. (Ward)



The left taillight had an oval brake and taillight above a blackout taillight. Wiring led from the vehicle's battery to the back of the light unit. An electrical socket port with cover is located beside the taillight. (Ward)



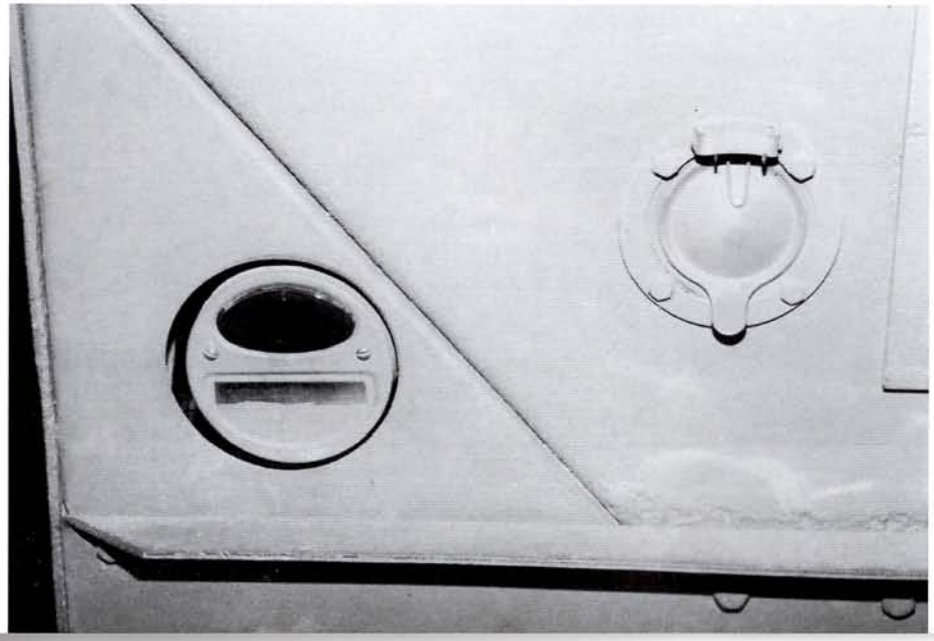
Access to the socket port was gained by lifting a small top-hinged flap. The flap's raised lower edge served as its lifting point. Taillight hookups for trailers were plugged into this socket. (Ward)



Both the M3 and its M16 derivative (Above) had indented taillights mounted flush with the back wall. The light arrangement was the same as on the M2, with the oval service stop and taillight above the left blackout light and a marker light above the right blackout light. (Ward)

The position of the M3/M16's rear lights were the same as on the M2; however, the extended rear wall allowed these lights to fit flush with the wall. The electrical power socket with its top-hinged flap is located inboard and above the left taillight. A small tab for opening the flap is mounted on the bottom. (Ward)

An M7A2 trailer pintle was mounted to the lower rear hull. This pintle was joined to a sleeve attached to the two rear chassis frames and was supported by an 'A' brace. M2s and M3s pulled a variety of trailers and guns using this pintle. (Ward)



This M7A2 pintle is in the closed position. Pulling out a cotter pin at the top unlocked it. This released the pintle's upper portion, which served as a handle. The upper portion was then lifted up to open the pintle. A chain dangles down to the locking pin.

The upper portion has been released and lifted up to open the pintle for the trailer's ring. Its handle was secured in place in a retaining mount at the rear.

The trailer's ring was placed inside the pintle's lower section before the upper section was lowered back into position. The cotter pin was then reinserted to hold the unit in place.

The pintle was identical on either side, except for the bolt and screw that brought together the upper and lower parts. This bolt and screw arrangement allowed the upper part to pivot. An unknown trailer is hooked up to this half-track, which bears the markings of the 1st Armored Division, 6th Infantry Battalion on the left fender.

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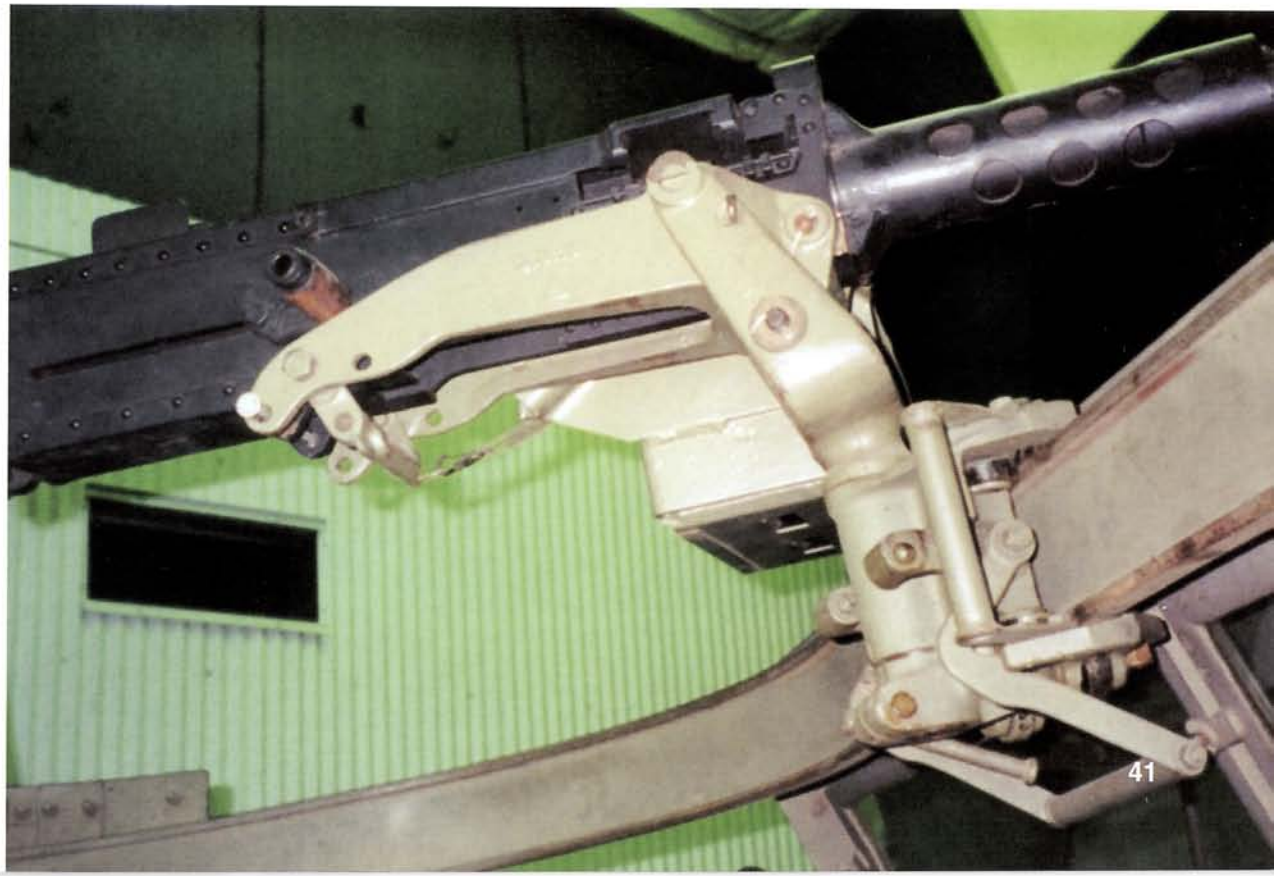
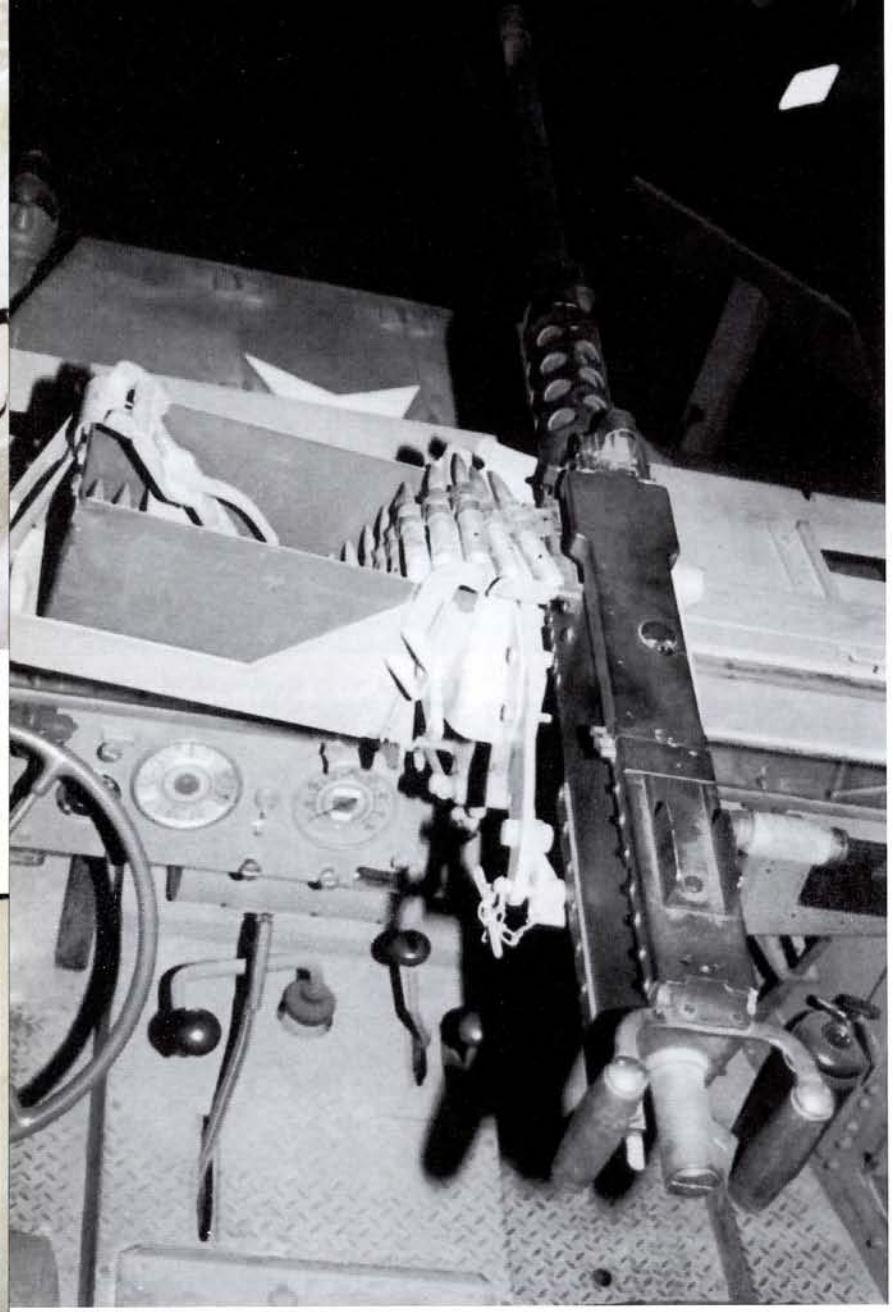
(Above) The M2 featured a skate rail that went around the entire inside of the troop compartment. A variety of .30 caliber (7.62MM) and .50 caliber (12.7MM) machine guns were mounted on this rail. This M2 is armed with a .50 caliber M2HB. (Ward)

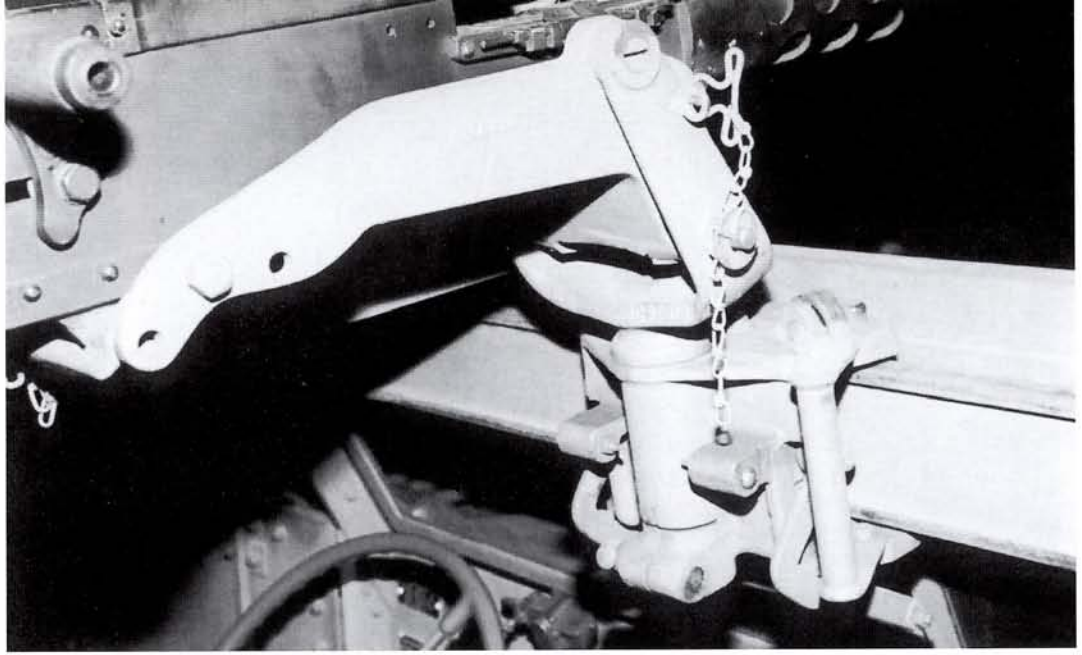
(Above Right) The M2A1 replaced the M2's skate rail with an M49 armored ring mount for a .50 caliber M2HB machine gun. This new arrangement allowed for a full 360° field of fire without interfering with the troops in the troop compartment. Side mounted equipment bins that jutted into the interior split the fighting compartment on both the M2 and the M2A1. (Green)

(Right) The skate rail acted as the support beam between the troop compartment wall and the windshield. The .50 caliber machine gun was able to traverse the entire length of this rail. This weapon is fitted to a mount that was fastened to the skate rail. This same mount was also used with the later M49 armored ring. (Ward)



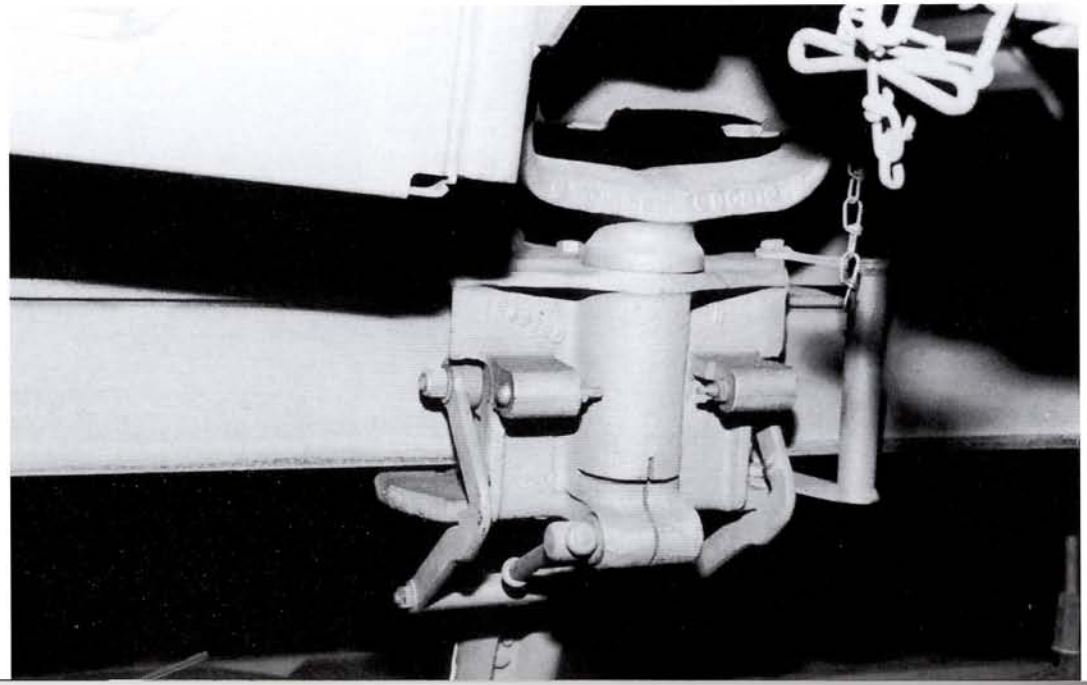


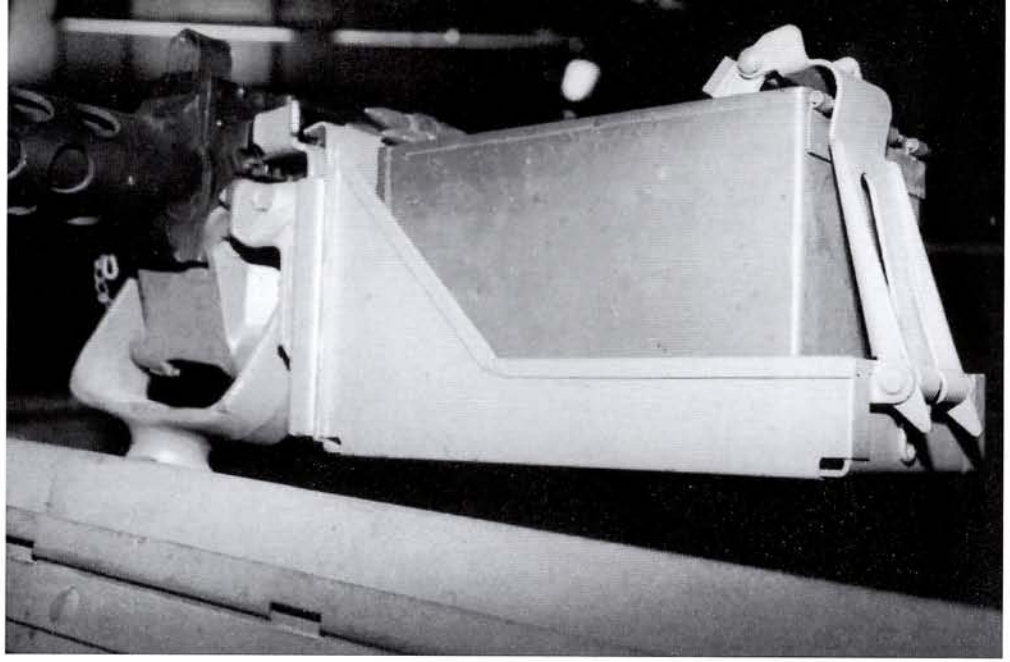
The .50 caliber M2HB was normally positioned toward the skate rail's front, while one or two .30 caliber machine guns were positioned along the sides toward the troop compartment's rear. These weapons were moved as the need arose to any position along the rail. Ammunition was put into metallic link belts that were fed into the M2HB. (Ward)



The machine gun pintle – on which the weapon was placed – sat in a moveable mount. This mount was pulled into place by sliding the gun or grabbing hold of the handle on the side of the mount to pull it along. This required some muscle and was difficult to do while on the move or when sitting on uneven terrain. (Ward)

A small mount-locking lever is located on the lower section of the machine gun mount. The handle bar under the mount temporarily held it in place when the mount was pulled into the upright position. (Ward)





(Above) A 110-round ammunition box fed the .50 caliber M2HB machine gun from the left side. It was locked into place on a cradle attached to the side of the pintle. The clasp hinged at the rack's outboard end held the ammunition box in the cradle. A lever on the center of the clasp was pulled down to lock the lever in place over the box. M2s and M3s often carried more .50 caliber ammunition than was normally specified. (Ward)

(Above Right) The belted ammunition was fed into the receiver housing located on the left side of the .50 caliber M2HB. This air-cooled weapon was fitted with a Heavy Barrel (HB). It allowed for rapid heat dissipation while the weapon was firing. The M2HB fired between 450 and 575 rounds per minute; however, it was normal to fire in short bursts rather than sustain fire for a long period of time. This reduced both ammunition consumption and wear on the weapon. (Ward)

(Right) Storage bins were located immediately aft of the M2's driver's compartment on both the left and right sides. These metal bins were opened either from the outside or the top. The lids were hinged against the wall and opened upward and out. (Ward)

(Above Left) The M2's storage bins were fitted with shelves for holding specific items of equipment. This shelf is divided into seven sections for orderly storage. (Ward)

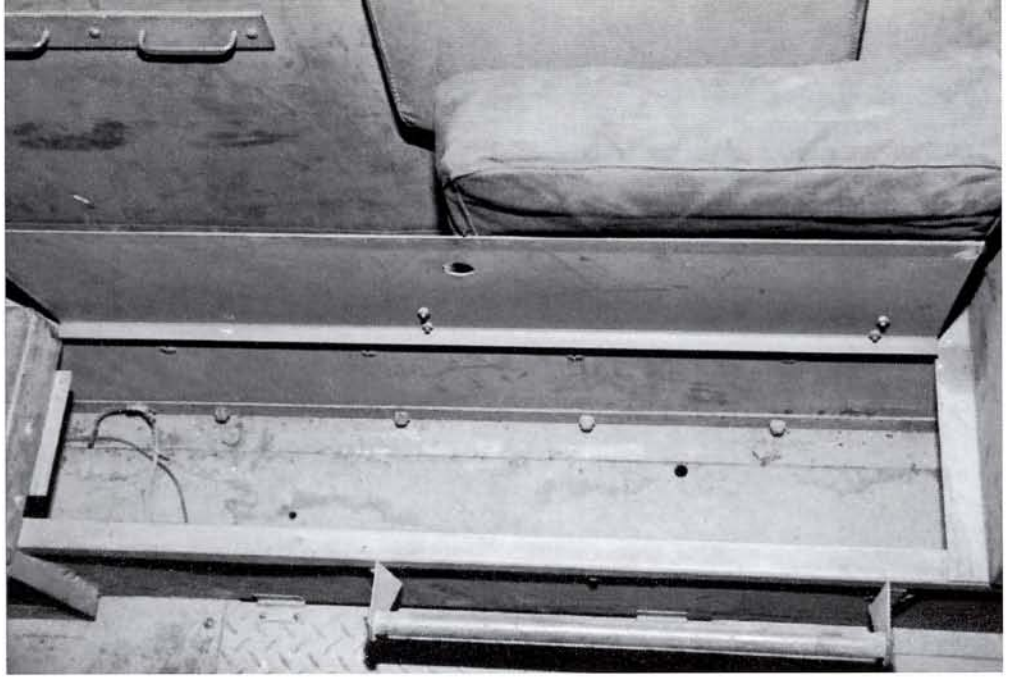
(Above) An SCR-193 High Frequency (HF) radio unit on a rack replaced the left storage bin on later M2s. The BC-191 transmitter is located on the left, while the BC-312 receiver is on the right. The SCR-193 sent and received both voice and Morse code messages. A tarpaulin secured to the upper edge covered the radio when it was not in use. It kept moisture and other foreign objects away from the SCR-193 unit. (Green)

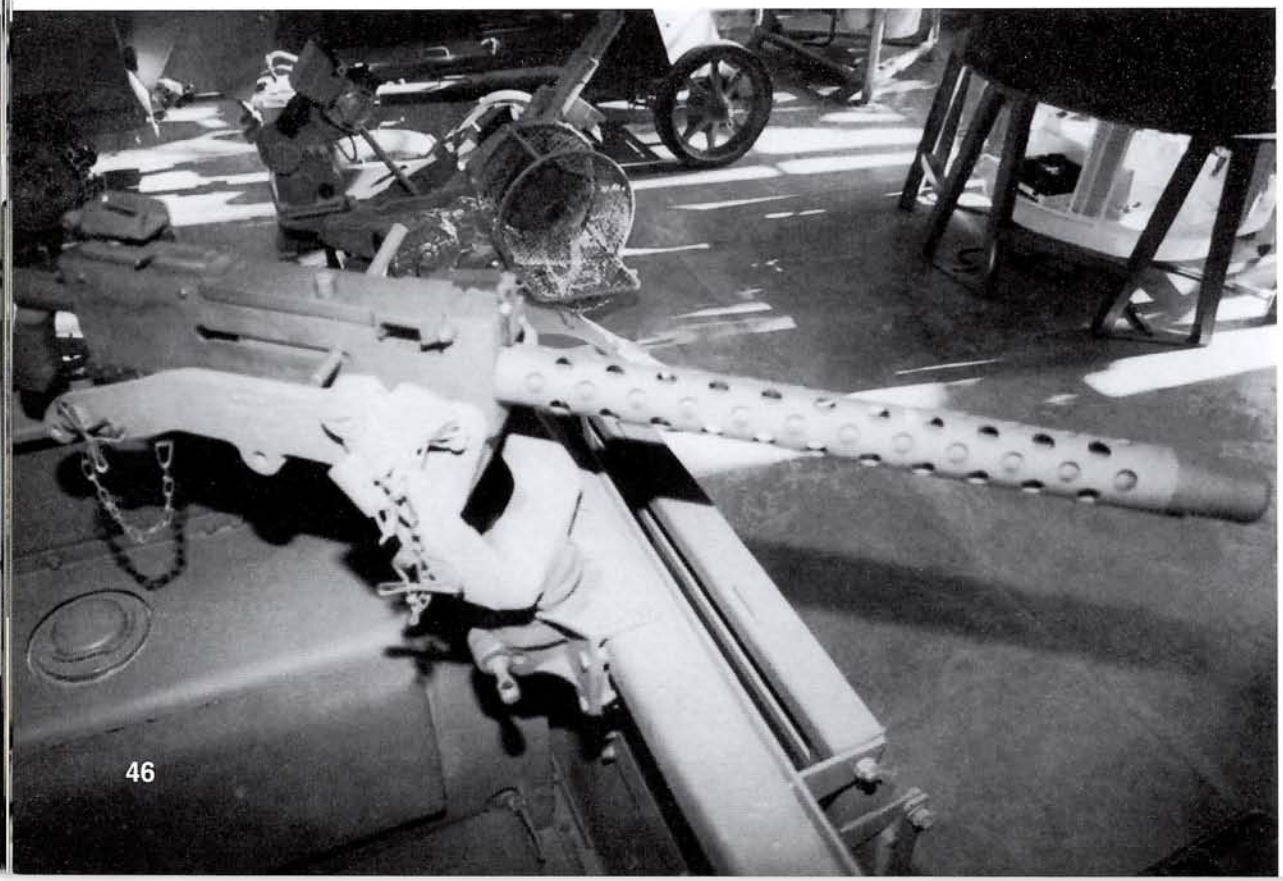
(Left) Two seats for crewmen were located between the storage bins. One seat faced forward, while the other faced aft. These were standard frame-type seats, with canvas-covered back and seat cushions. (Ward)

(Above) These seats folded down to facilitate easy movement between the driver's compartment and the rear troop compartment. Personnel stepped on the seat backs while moving through this area. The use of folding seats made going over them less of a chore than if they were non-folding seats. (Ward)

(Above Right) The M2's troop compartment had six additional seats in two rows of three seats. These seats all face inward. The two seats immediately aft of the storage bin and radio set are slightly recessed compared to the other four seats, which are placed against the two 30-gallon (114 L) gasoline tanks. Additional storage bins were located under the floorboards and seats. The M2A1 lacked the rear exit door that was installed on the M3 series vehicles. (Green)

(Right) Three inward-facing seats were mounted on both the left and right sides of the troop compartment. The two aft seats were mounted against the 30-gallon gasoline tank, while the other was located in the recess between this tank and either the storage bin or radio. A fixed mount for a .30 caliber (7.62MM) Browning M1919A4 machine gun is located immediately above the recessed seat. (Green)





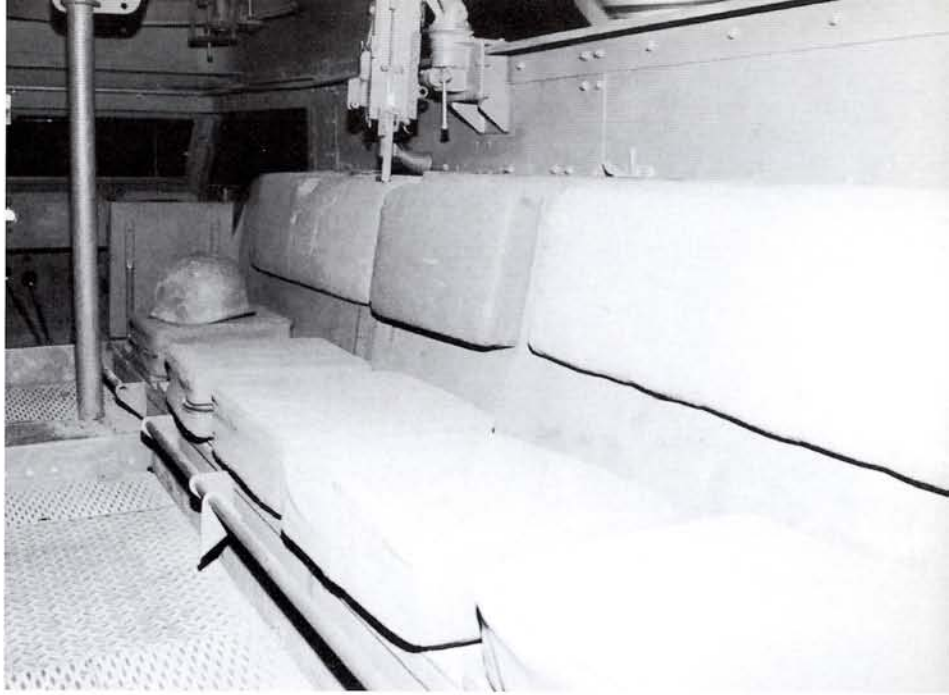
(Above Left) The M2 troop compartment's right side was a mirror image of the left side. Storage space was located behind the forward seats' aft support brace. The panel underneath the seats lifted up for additional storage when the cushions were removed. A machine gun mounting bracket is located above the forward seat, while a .30 caliber weapon is mounted on the back wall. (Green)

(Above) The storage bin underneath the seat cushions was used for a wide variety of gear. This included personal gear and various items of military hardware. No latches secured the bin's lid, which relied on its weight to stay closed. (Ward)

.30 Caliber (7.62MM) Browning M1919A4 Machine Gun

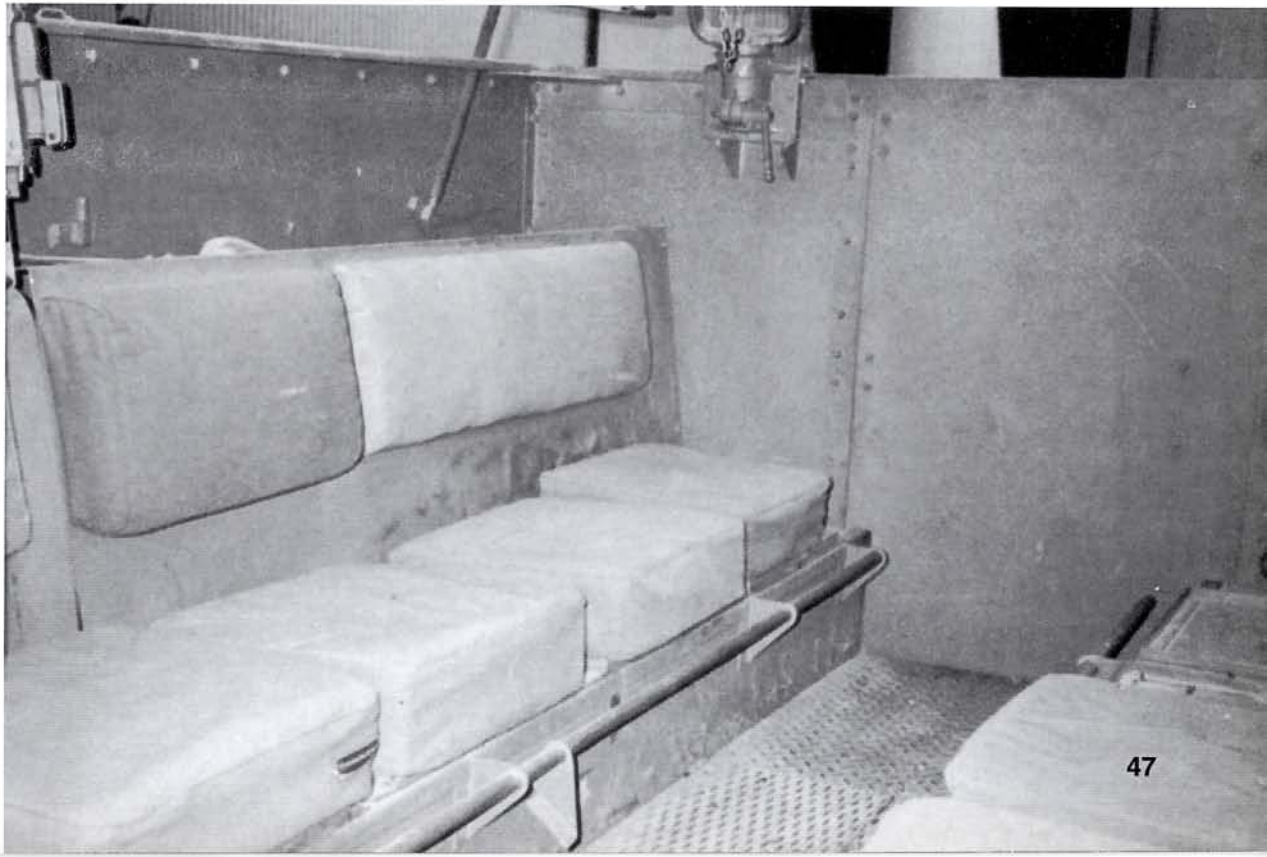
Overall Length:.....41.1 inches (104.4 CM)
Barrel Length: .....24 inches (61 CM)
Weight (Unloaded): ..31 pounds (14.1 KG)
Magazine: .....250-round fabric belt
Cyclic Firing Rate: ....400 to 550 rounds per minute
Muzzle Velocity: .....From 2050 feet (625 M) to 2950 feet (899 M) per second, depending upon ammunition.

(Left) A third .30 caliber machine gun mount was installed on the rear wall of this M2. An M1919A4 is fitted to this vehicle on that mount. Depending on what the crew was able to beg, borrow, trade, or steal, they might have up to three .30 caliber weapons mounted in addition to the .50 caliber machine gun. This was a tremendous amount of firepower. (Green)



(Above) The M3 lacked the storage bins that protruded into the M2's troop compartment. This increased the accessibility and space available to M3 crews. This M3A1 at the World War Two Vehicle Museum in Hubbard, Ohio has an SCR-528 Frequency Modulation (FM) radio set located in the left rear of the troop compartment. Metal poles mounted along the sides supported the optional canvas roof for the troop compartment. (Ward)

(Above Right) Each side of the M3's troop compartment was normally lined with five canvas-covered cushioned seats, since this vehicle was designed as a personnel carrier. The only obstruction was the M49 ring mount support pole in this M3A1. A US Mk I steel helmet sits on the first seat of this row. Above the third seat from the front is a wall-mounted .30 caliber M1919A4. (Ward)



(Right) Five sets of seats lined each side of the compartment, which provided a total of ten seats along both the left and right sides. A troop door was mounted on the M3's rear wall. This feature was not found on the M2. Machine gun mounts were fitted at various locations along the side and rear walls. (Ward)

(Above Left) The two left rear passenger seats were removed from this restored M3A1 and replaced by an SCR-528 FM radio set. A wire led from this set to the antenna located atop the rear wall. The canvas-covered seat cushions were removable for accessing the lower storage bins and for placing bulky items in this compartment. M3 troop compartments were painted the same Olive Drab (FS34087) as the vehicle's external surfaces. (Ward)

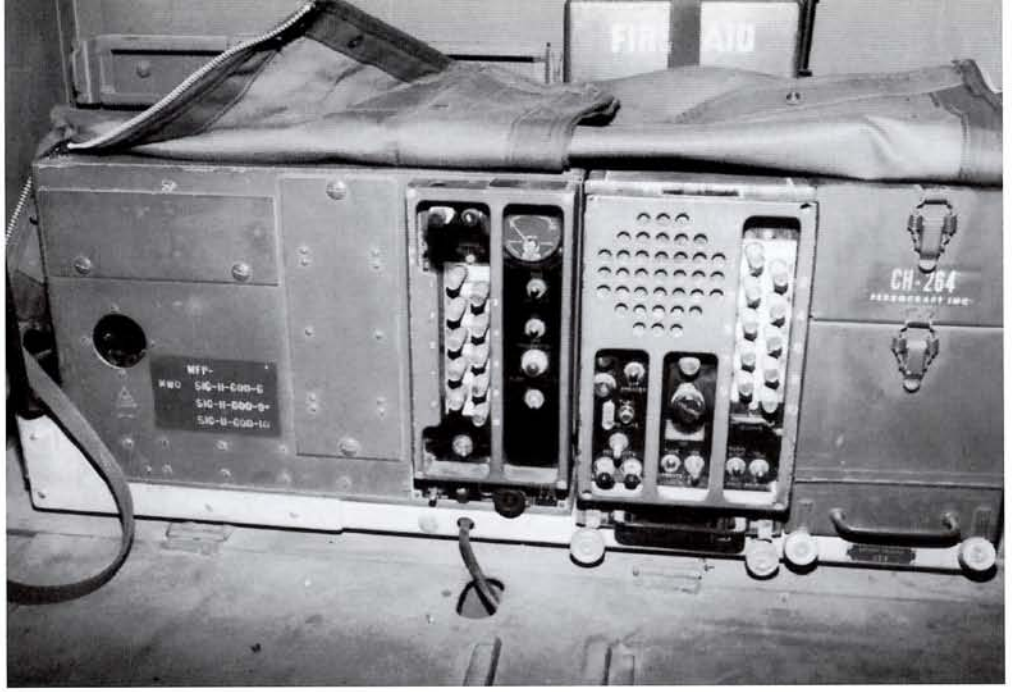
(Above) An open storage space was located behind the rear troop seats. Weapons racks were optionally fitted to this space, which could also hold personal items. (Ward)

(Left) A long storage bin was located underneath the seat cushions on both the left and right sides. The cushions were removed and the lid was raised to gain access to this compartment. The lid hinged to the side wall and was secured atop the bin through its weight and that of the seat cushions and the personnel seated on them. Canvas backpacks and equipment sacks are loaded into this bin. (Ward)

(Above) The front two seats were next to the 30-gallon (114 L) fuel tank on either side of the troop compartment. The M3's fuel tanks were located directly aft of the driver's compartment, unlike the tanks installed on the M2. The M2/M3 series vehicles burned 72-octane gasoline. The fuel tank filler cover was fitted atop the center of the tank. (Ward)

(Above Right) The fuel tank filler cap was recessed within a circular opening on the tank's outer wall. It opened by simply lifting the small handle around the hub and turning it counterclockwise. (Ward)

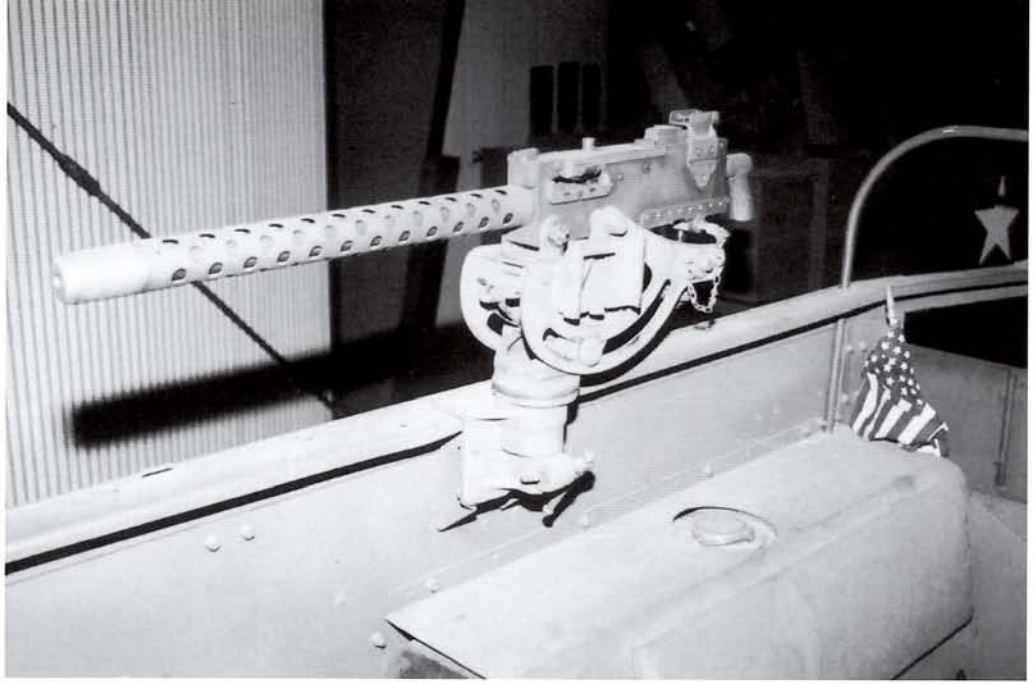
(Right) A mesh strainer was installed inside the fuel tank filler pipe. This filter kept dirt and debris away from the fuel supply. Such foreign objects in the fuel supply interfered with efficient engine operation. The filter was lifted out of the pipe for cleaning. The opened fuel filler cap rests beside the filler pipe. A vent for fuel fumes protrudes from the inside of this cap.



(Above Left) The fuel line exited from the fuel tank's lower front corner. It then fed gasoline into the fuel line underneath the floor to the engine. A thin steel plate separated the tank from the seat in the driver's compartment. This plate also acted as a sidewall brace. (Ward)

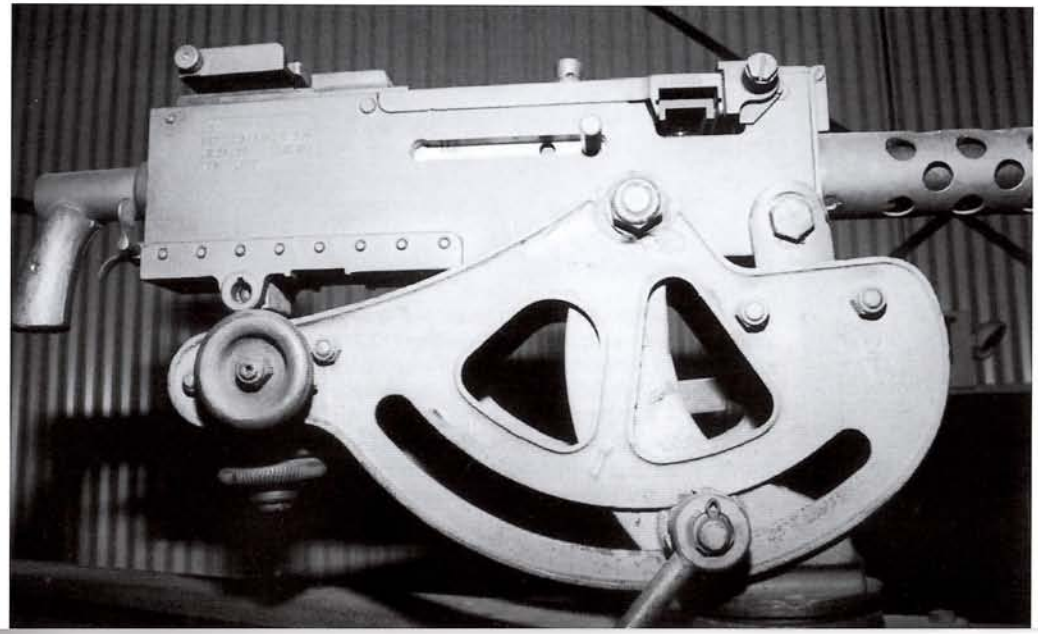
(Above) This M3A1 displayed at the Hubbard Museum has an SCR-528 radio set mounted in place of the two left rear seats. The BC-604 transmitter is located to the left, while the BC-603 receiver is placed to the right. The SCR-528 was an FM voice-only (no Morse code) set installed in US armored vehicles late in World War Two. It had a range of ten miles (16.1 KM). (Ward)

(Left) A special canvas cover was designed to protect the SCR-528 from the elements. This cover was split to individually cover both the transmitter and receiver components. Metal snaps secured the edges of the cover sections. A first aid kit is mounted against the wall behind the radio set. (Ward)



Several machine gun mount holders were fitted along the troop compartment walls. A .30 caliber (7.62MM) Browning M1919A4 machine gun is fitted to this mount. This air-cooled weapon had a range of between 2875 to 3500 yards (2629 to 3200 M), depending upon the type of ammunition fired. (Ward)

The M1919A4 was mounted in a cradle that was attached to a pintle mount. This cradle allowed the gunner to elevate or depress the weapon. A locking device at the rear kept the weapon from moving up or down. The cocking handle can be seen in the middle of the receiver. Immediately forward of the pistol-type grip is the gun's trigger. (Ward)

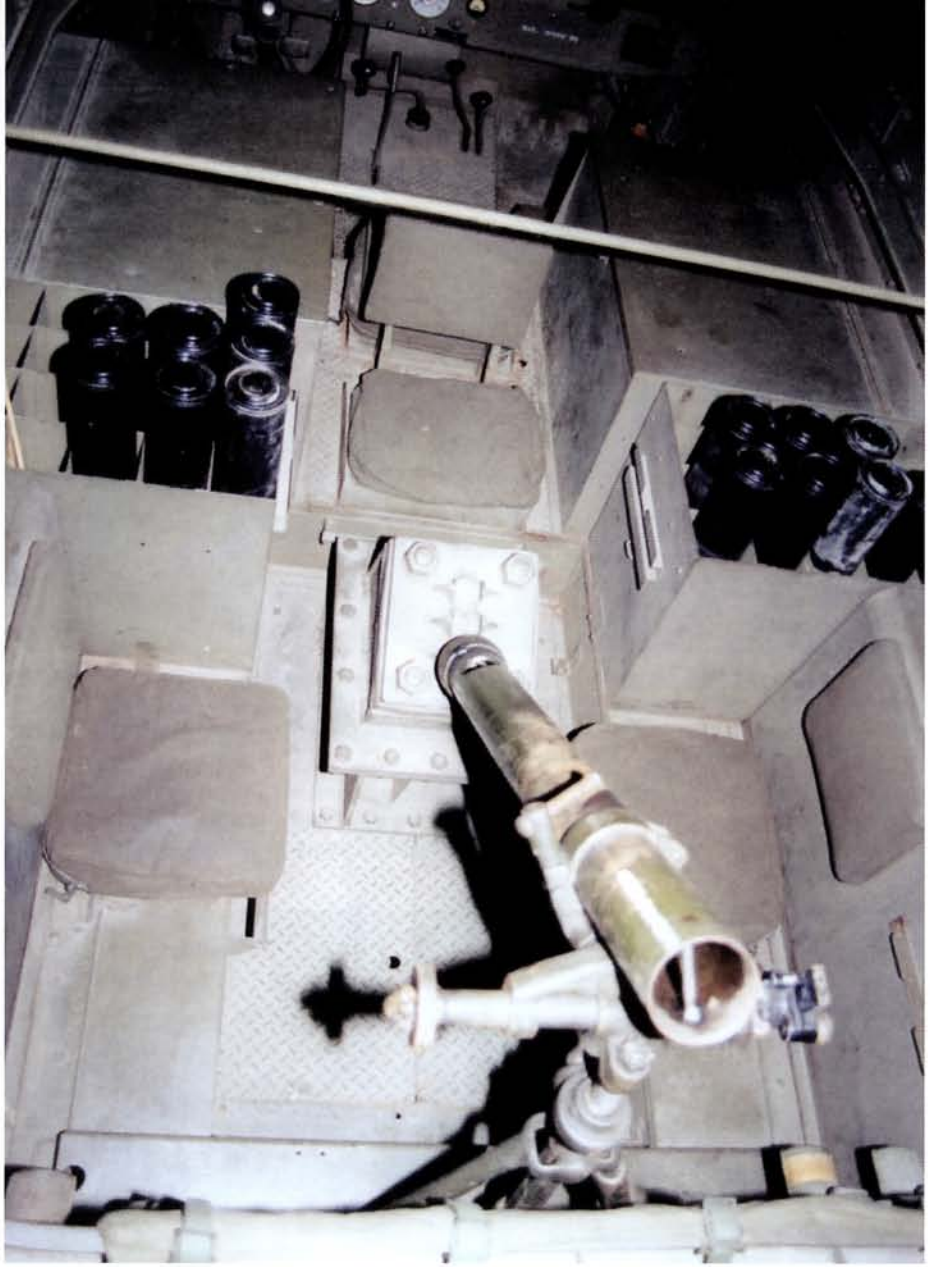


The SCR-528 radio's antenna was mounted atop a ledge in the left rear corner of the troop compartment. A cable ran up from the radio to the base of the nine-foot (2.7 M) long whip antenna atop this mount. A coiled spring is located in the lower portion of this antenna mount, while a glass insulator is located below the whip antenna. This antenna and mount were fitted to other locations along the rear wall as the need arose. (Ward)

(Above Left) A rectangular attachment point for the ammunition box was located on the left side of the cradle. The .30 caliber M1919A4 machine gun was fed with 250-round fabric belts of ball, tracer, armor piercing, and incendiary rounds. Its rate of fire was between 400 and 550 rounds per minute. (Ward)

(Above) The entire gun cradle unit was placed on a cast mount that bolted to the compartment wall's side ledge. These could be mounted at various locations, depending on the crew's preference. The lever on the right locked the unit in place when not in use. (Ward)

(Left) Although .30 caliber machine guns were normally mounted to the rear compartment, larger .50 caliber (12.7MM) weapons were sometimes fitted. The .50 caliber M2HB was air-cooled and fired ball, armor piercing, and tracer ammunition. The tracers' range was 6000 yards (5486 M), while ball and armor piercing rounds could reach out to 7200 yards (6584 M). A 110-round ammunition box is mounted beside this weapon. A cocking handle is mounted along the right side aft of the breech, while two spade-type grips flank the trigger on the weapon's aft end. (Ward)



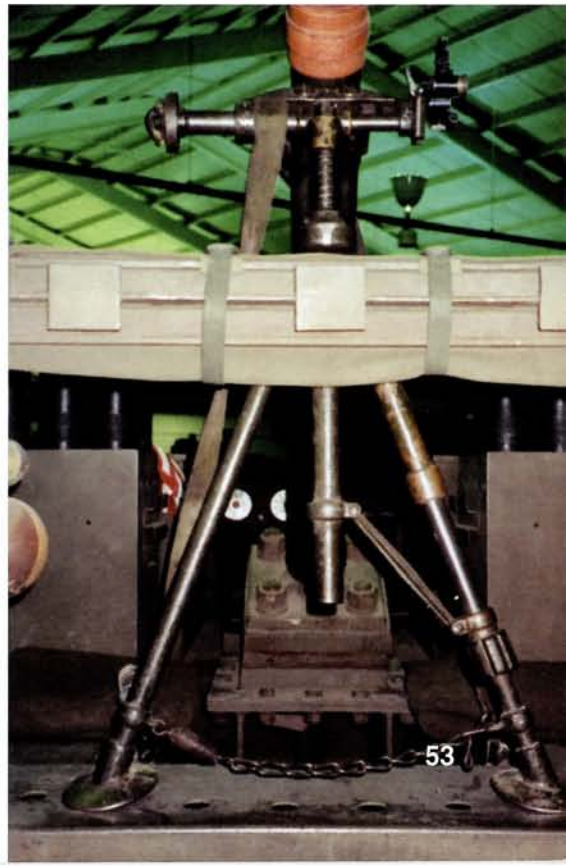
The M4 Mortar Motor Carriage (MMC) was the first standardized variant of the M2/M3 series. It featured a rearward facing 81MM M1 mortar fitted to an M1 mount. The mortar was normally dismounted for firing, but was fired from the vehicle in an emergency. Fifty six shells were stored in the two side bins – twenty-eight per bin – and 40 more rounds were carried in the two open-top bins behind the weapon, for a total capacity of 96 shells. (Ward)

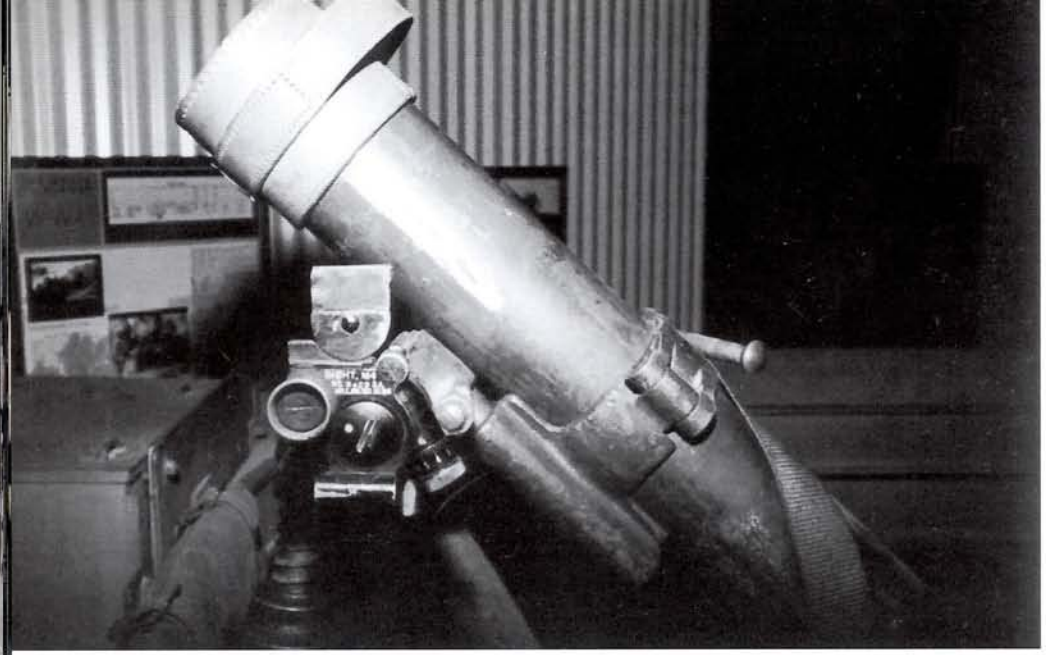
The M4 MMC had a base for firing the 81MM M1 mortar from the vehicle; however, this put a strain on the chassis. The M4 chassis was reinforced to alleviate this strain. Additionally, an improved base plate for additional traversing was installed. A metal bar spanned the fighting compartment aft of the mortar. (Ward)

81MM M1 Mortar

Barrel Length:	49.5 inches (125.7 CM)
Weight in Action:	136 pounds (61.7 KG)
Elevation:	40° to 85°
Traverse:	14°
Muzzle Velocity:	744 feet (227 M) per second
Range:	Minimum – 100 yards (91 M); Maximum – 3290 yards (3008 M)
Ammunition:	6.9 pound (3.1 KG) M43A1 High Explosive (HE); 10.6 pound (4.8 KG) M36 HE; 10.8 pound (4.9 KG) M57 White Phosphorous (WP) smoke; and 10.7 pound (4.9 KG) M301 illumination.

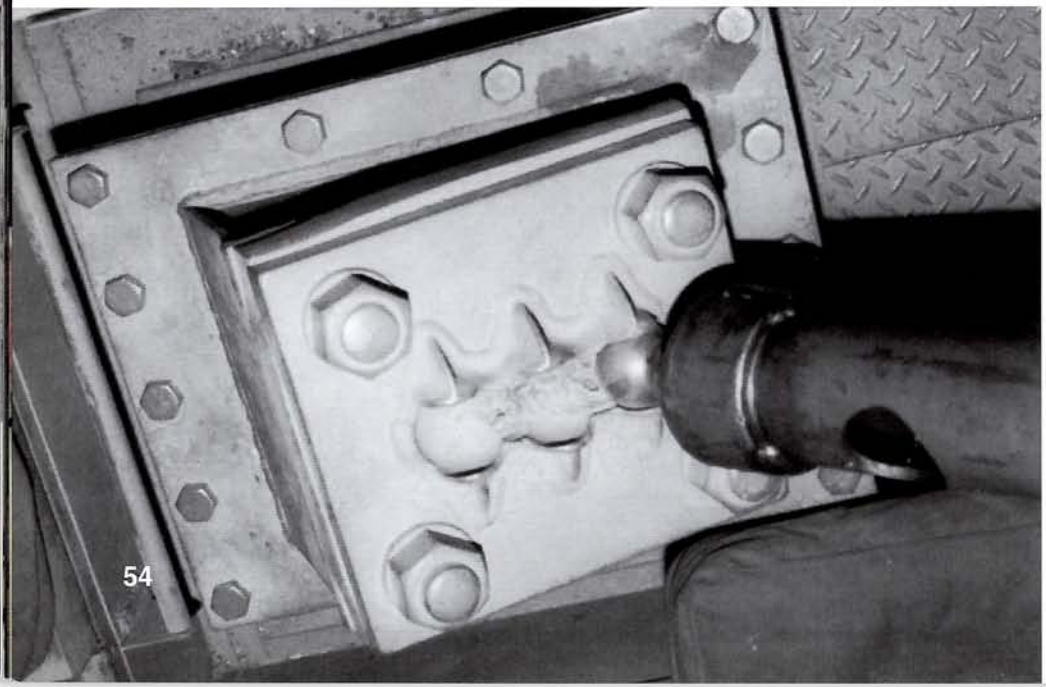
The legs of the M1 mount fit into holes on a beam that spanned the troop compartment's rear section. This allowed the barrel to be elevated or depressed, depending on how wide or narrow the legs were set. A chain was strung between the legs just above the base. (Ward)





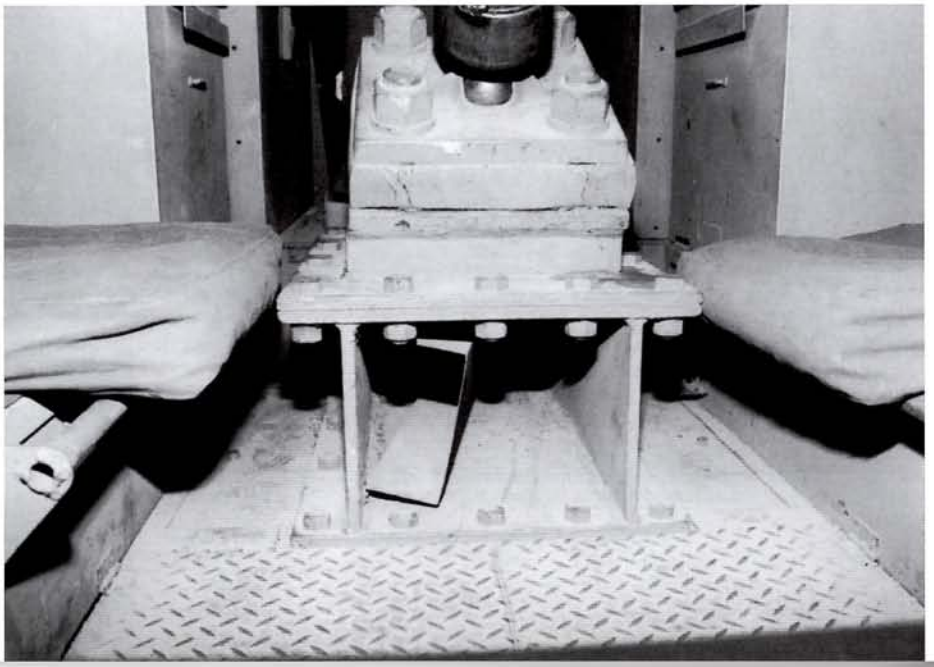
The M4 sighting device was located on the left side of the M1 mortar tube. This allowed the gunner to locate and range in on his target either directly or through radio communication. A leather cover placed over the tube kept moisture and dirt out of the tube. (Ward)

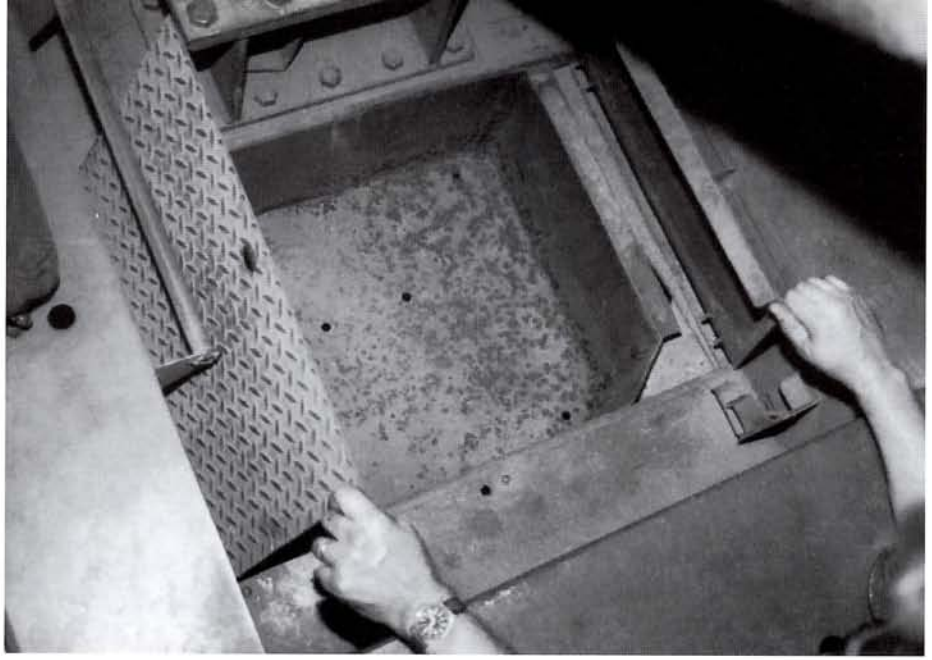
Adjusting its position in the base plate also changed the mortar's elevation. The ball at the tube's base was placed in one of three sockets. When taken in combination all these factors worked together to determine how far the mortar round could be projected. (Ward)



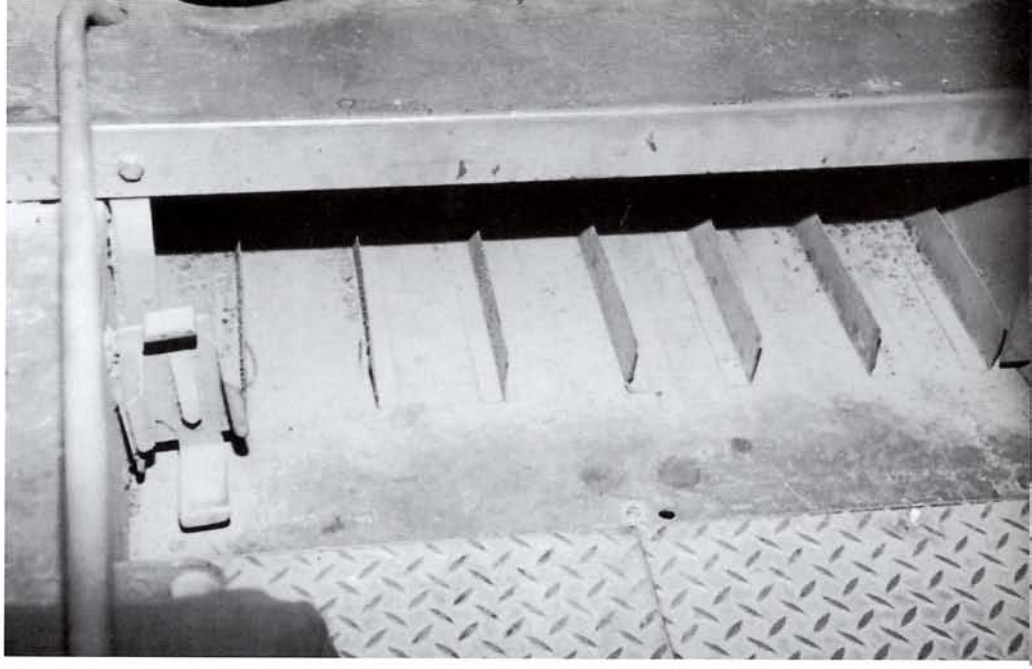
Besides using the legs for elevation, the tube was elevated or depressed by turning the elevation screw at the bottom of the tube. The screw is in a tube to which the legs are attached, while the turning handle is located on the left of this screw. The M1 mortar's elevation range was 40° to 85°. (Ward)

The M1's base sat on a reinforced steel frame that was bolted to the floor. Vehicles coming off the production line with this modification were designated M4A1. Factories built 600 M4A1s on M3 chassis along with 572 M4s on M2 chassis, which lacked this base frame. (Ward)





A small storage compartment was located between the base plate and the bipod. M4 crews used this to store a variety of personal and military items. The two doors were hinged at the left and right sides to the bottom of the troop bench. (Ward)



Additional storage slots for what is believed to be ammunition boxes were located underneath the bipod bar. It appears that these items were held in place by a retaining bar. (Ward)

The side bins each held twenty-eight 81MM mortar shells. Each round came in a heavy duty fiberboard tube with metal tops and bottoms. This tube protected the shell in storage and shipping. (Ward)

Two open-topped bins in the troop compartment each held 20 mortar shells. These were the ready rounds and the mortar's crew used these up before opening the side bins for the stored rounds. (Ward)

The 81MM mortar shells were individually packed into large black fiberboard tubes, with metal end covers. Each round weighed between 6.9 and 10.8 pounds (3.1 and 4.9 KG), depending on the type. The tube was labeled in white with the type of shell it held; this tube holds an M57 White Phosphorous (WP) smoke round. The tube covered the colored bands on the shell that identified its type; for example, this M57 should have a yellow band and markings on the gray body. (Ward)

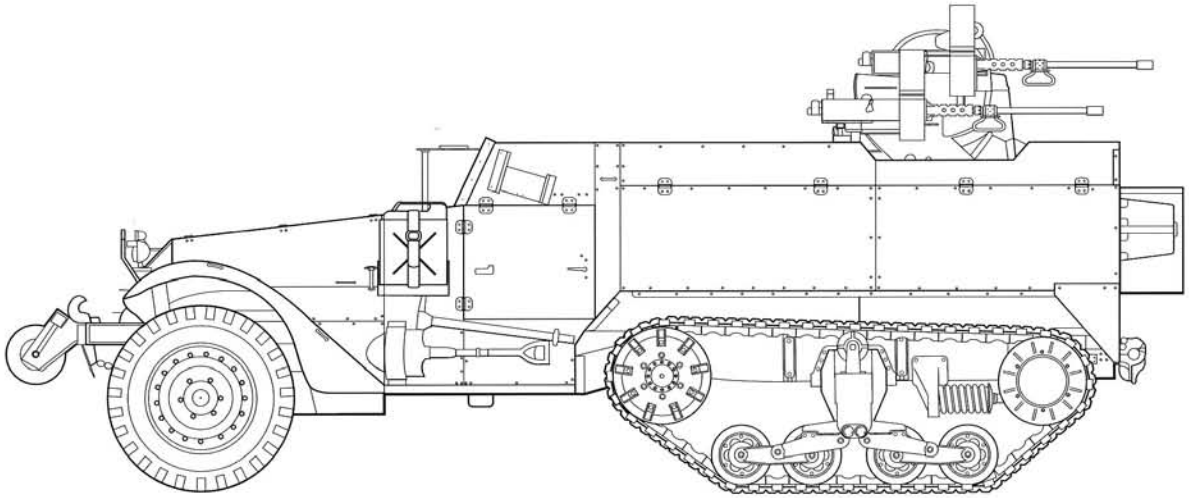
Additional storage bins were installed next to the fuel tank on either side. Two blackout headlights, each with a smaller marker light on the top, are placed in holders mounted on the right rear wall. (Ward)

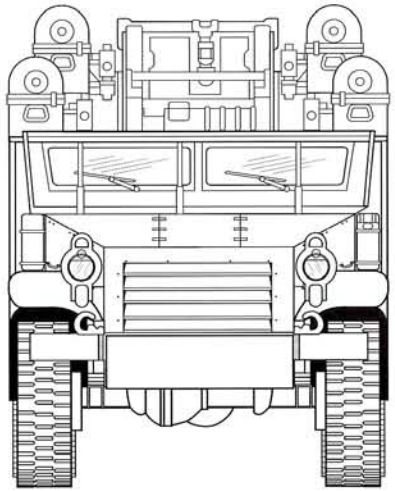
Another set of blackout lights – including one missing its blackout cover – was stored on the left side. The skate rail ran completely around the fighting compartment and blocked the top of the rear door. This rail was attached to the wall in the back by the triangular flange bolted onto the corner. (Ward)

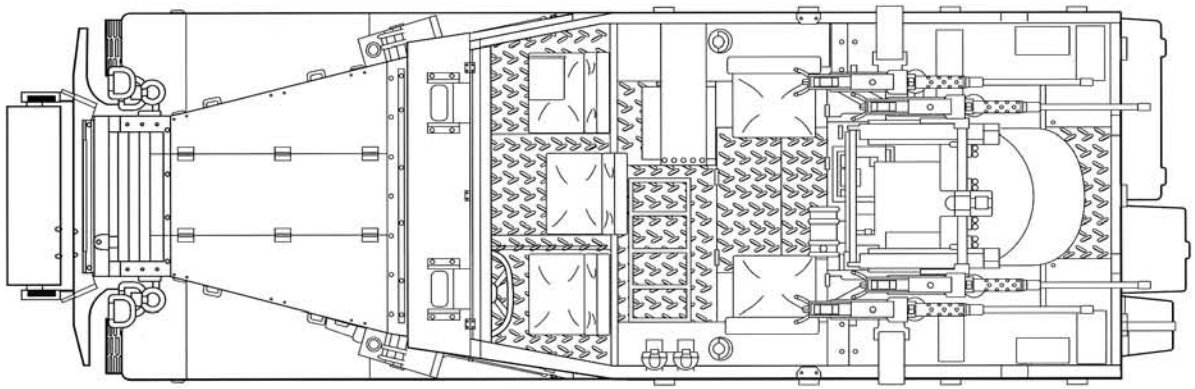
(Above) The M16 Multiple Gun Motor Carriage (MGMC) was the largest M3 variant produced. It was designed for use as an anti-aircraft weapon. The M16 was armed with four .50 caliber (12.7MM) M2HB machine guns in a power operated Maxson M45D turret that revolved through a 360° arc. US factories built 2877 M16s during World War Two.

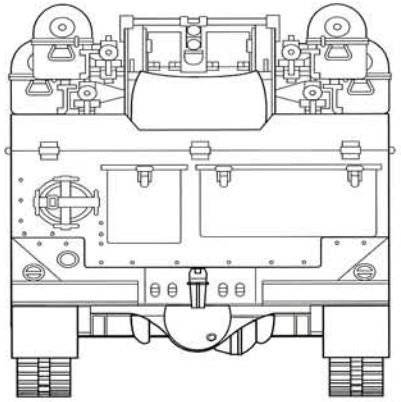
(Above Right) The M16's front was identical to the M3, but the rear troop compartment was modified to hold the Maxson turret. The upper portions of the left, right, and rear walls were modified to fold down. This allowed the lower .50 caliber machine guns to traverse. Cutouts in these panels allowed the lower ammunition bins to turn when the sides were raised. A camouflage net is strapped to the left front fender of this M16.

(Right) The right and left panels are folded down against the hull; however, storage boxes bolted to the rear wall prevented the rear panel from fully folding. An earlier version of this vehicle designated the M13 had only two .50 caliber guns in a Maxson M33 turret on an M2 chassis. Although the M13 was successful, few vehicles were built as the four-gun M16 replaced the M13 on the production line.



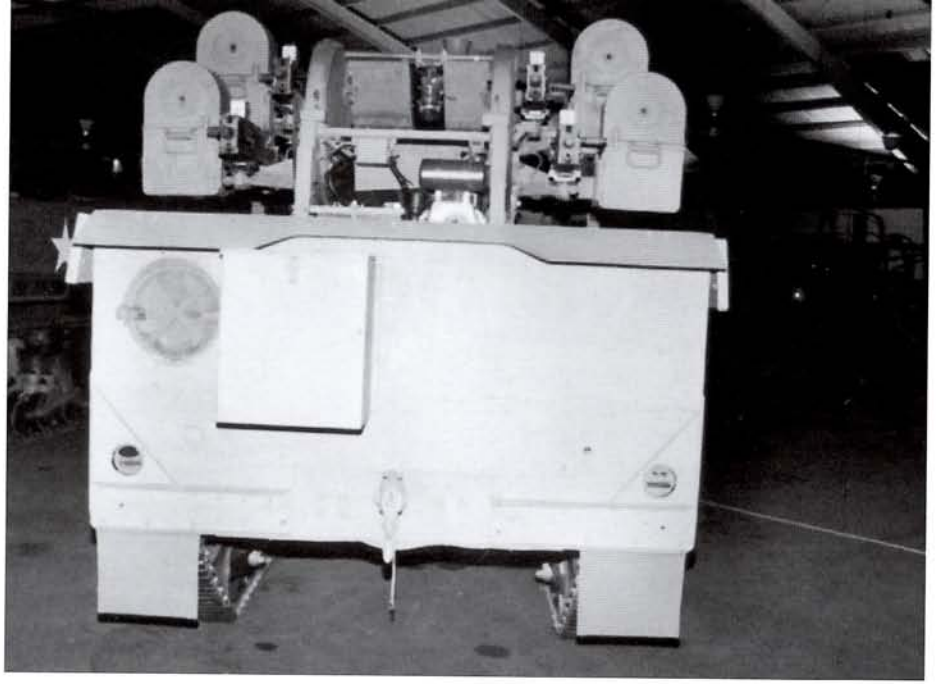






M16 Multiple Gun Motor Carriage Specifications

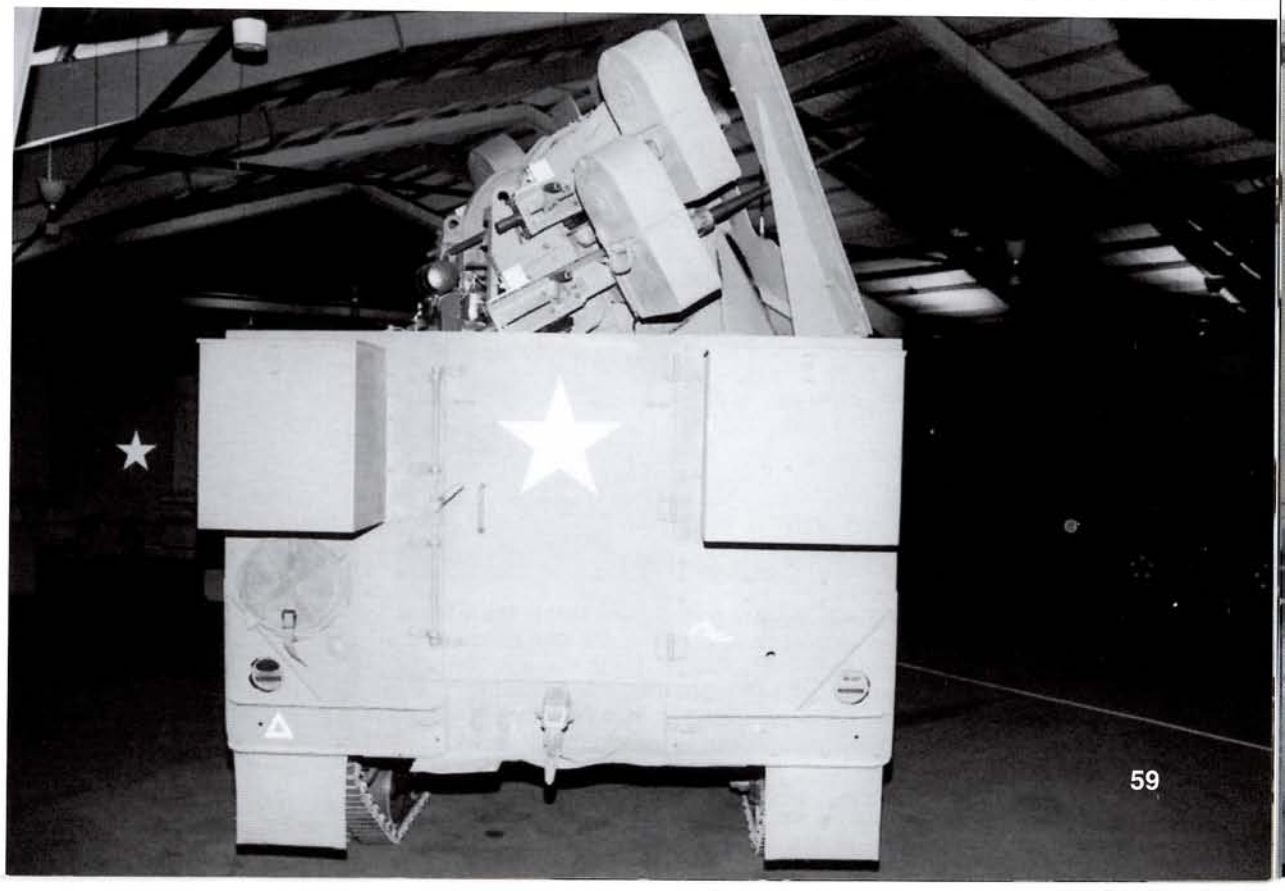
Length:.....21 feet 4 inches (6.5 M)
Width:.....6 feet 5.9 inches (2.0 M)
Height: .....8 feet 7 inches (2.6 M)
Empty Weight: .....15,300 pounds (6940 KG)
Maximum Weight:..19,000 pounds (8618 KG)
Powerplant: .....One 147 HP White 160AX six-cylinder, liquid-cooled, inline engine
Transmission: .....Manual – Four speeds forward, one reverse
Armament:.....Four .50 caliber (12.7MM) Browning M2HB machine guns with 1250 rounds per gun in Maxson M45D turret in troop compartment
Maximum Speed: ..45 MPH (72 KMH) on Road
Range: .....200 miles (322 KM)
Crew: .....Five



(Above) The M16 – like the M2 – lacked the rear troop compartment door installed on the M3. A storage box was mounted to the left side of the rear wall. Another such container was commonly found on the right side, but is not installed on this preserved vehicle. A large single storage box replaced the two smaller containers on later M16s.

(Above Right) The US Army had a need for additional M16s during the Korean War. Over 1600 M3s were converted to M16A1 standard, including this vehicle. The Maxson M45F turret – a variant of the M16's M45D – was placed on a higher pedestal. This lifted the guns above the M3's non-folding sides. The M45F turret also featured side wing armor to protect the loaders from small arms fire and shrapnel.

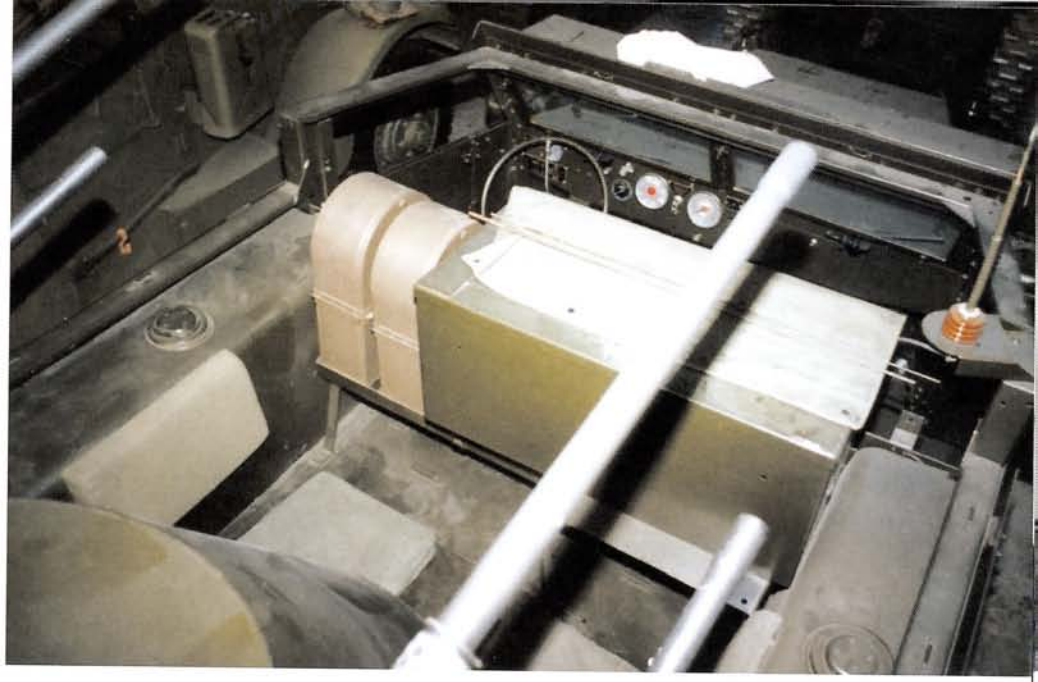
(Right) The M16A1 retained the M3's rear troop compartment door. Two storage bins mounted on the rear wall flank this door. The M45F turret was retrofitted to over 400 M16s, which were redesignated as M16A2s. The M16 and its modifications saw extensive service in the ground support role during the Korean War.



A rifle rack was placed alongside the M16 passenger's seat in the driver's compartment. This rack held one .30 caliber (7.62MM) M1 rifle, which is not mounted on the rack. Canvas straps secured the rifle to the rack. The M16 also had provisions for three .30 caliber M1 carbines, one .45 caliber (11MM) submachine gun, and 36 rifle grenades. Crewmembers used these personal weapons for close-in defense against enemy troops. (Ward)

Unlike the M2/M3, the M16 had a wall behind the driver's compartment. A small jump seat was fitted between the driver's and passenger's seats. Other interior details were identical to the M2/M3 vehicles. (Ward)

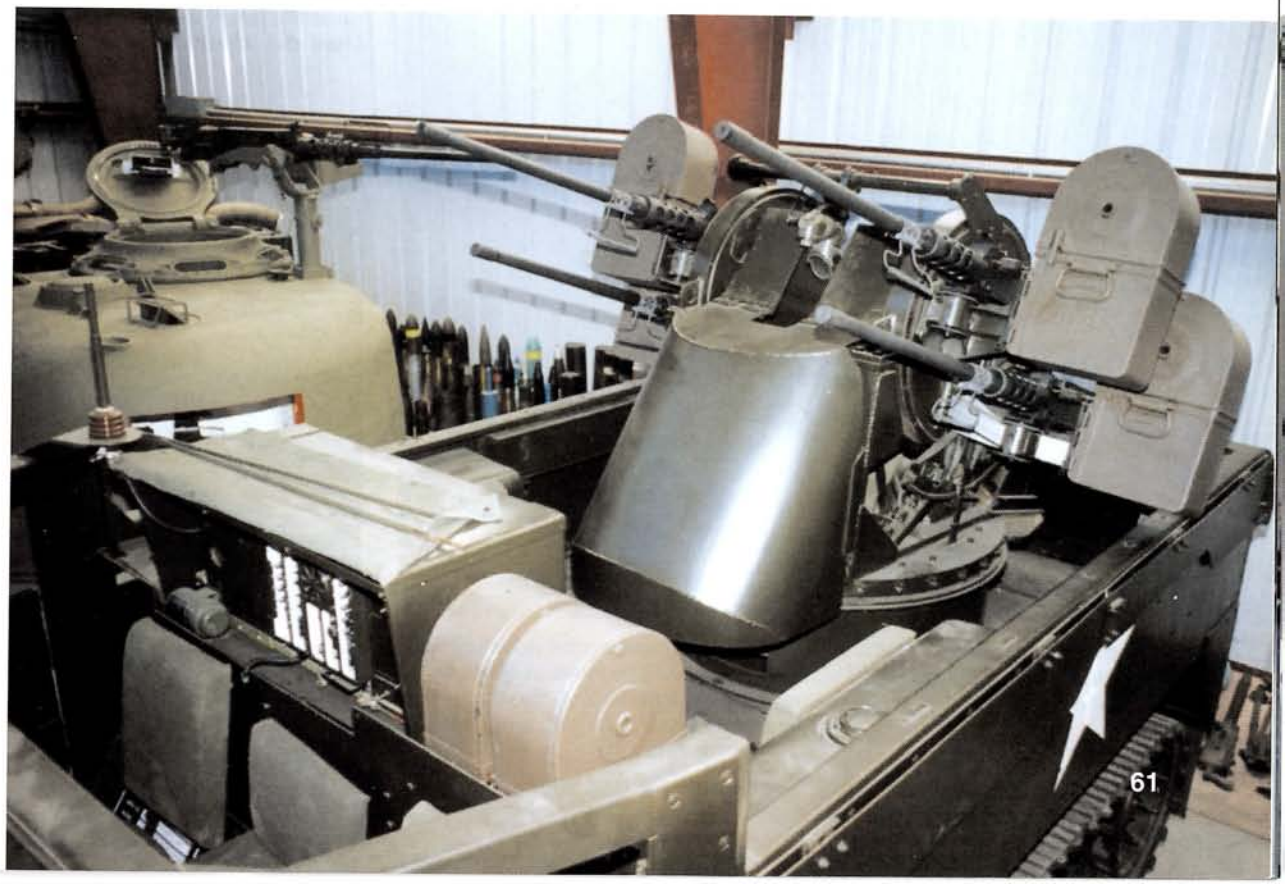
The driver's compartment rear wall was stripped down on this M16A1. This vehicle was being backdated to the original M16 at the World War Two Vehicle Museum in Hubbard, Ohio. The sides were removed and the frame for the armor is partially visible.

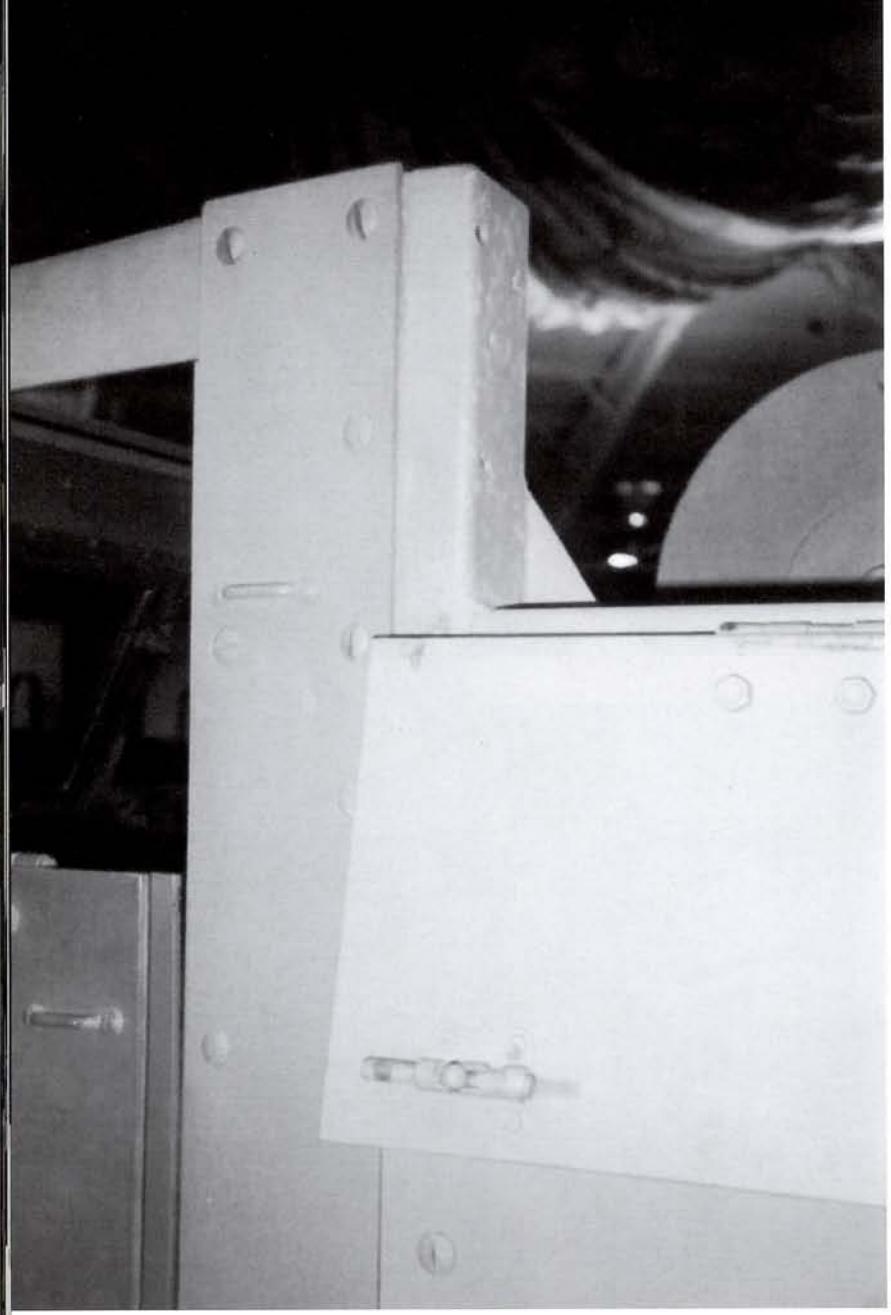


(Above) A rack was bolted on the driver's compartment rear wall to hold the large 200-round ammunition chests that fed the .50 caliber machine guns. Four chests were normally stored on this rack, along with a box for an SCR-528 FM radio. The M16 carried up to 25 such chests, for a total of 5000 rounds of .50 caliber ammunition. (Ward)

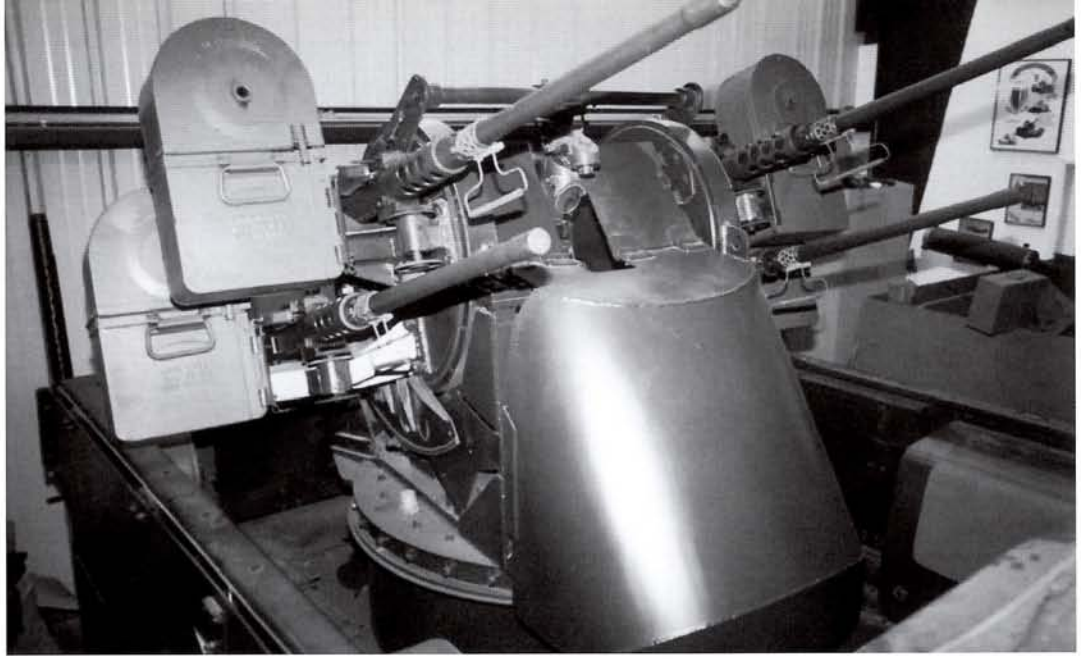
(Above Right) Later M16s had a larger stowage box, which eliminated space for two ammunition chests. An antenna for the SCR-528 radio is mounted on a ledge attached to the right upper frame of the driver's compartment. The vehicle's two 30-gallon (114 L) gasoline tanks flank this rack. All M2/M3 series vehicles had an approximate range of 200 miles (322 KM). (Green)

(Right) The M16 mounted a Maxson M45D electrically-operated turret in the rear troop compartment. It could revolve through a 360° arc in six seconds. The M45D was fitted with four .50 caliber (12.7MM) Browning M2HB machine guns. These weapons were primarily employed on anti-aircraft missions, but were sometimes used in the ground support role. (Green)



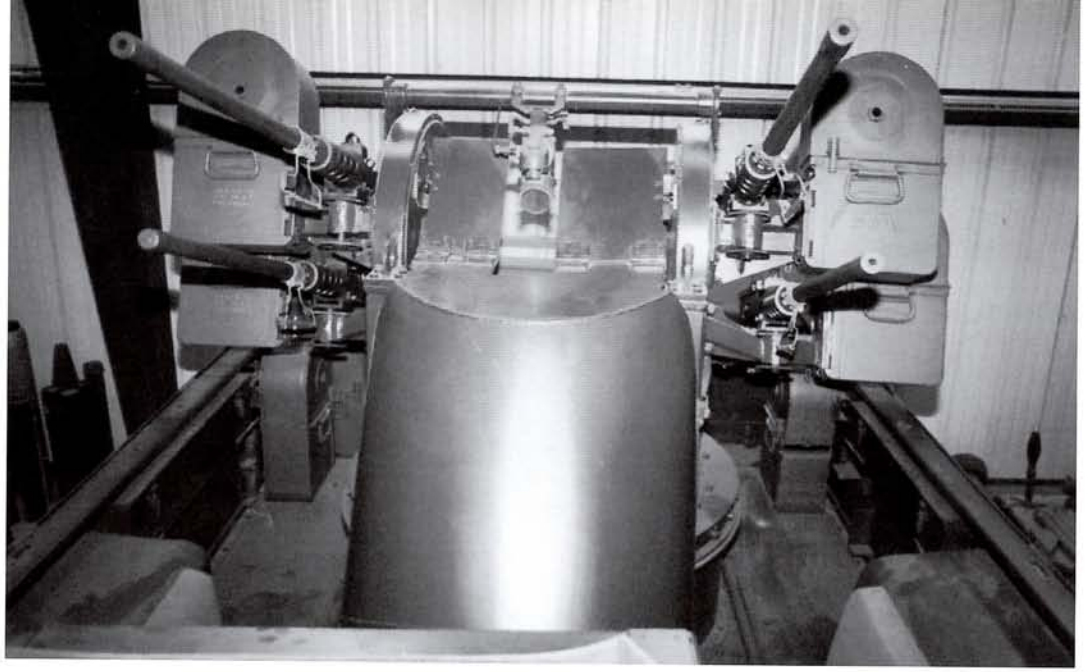


A top-mounted deadbolt held the side and rear flaps in place. It slid into a hole in the supporting frame. This bolt is mounted on the lower left corner of this lowered flap, while its seating hole is at the top of the supporting frame.



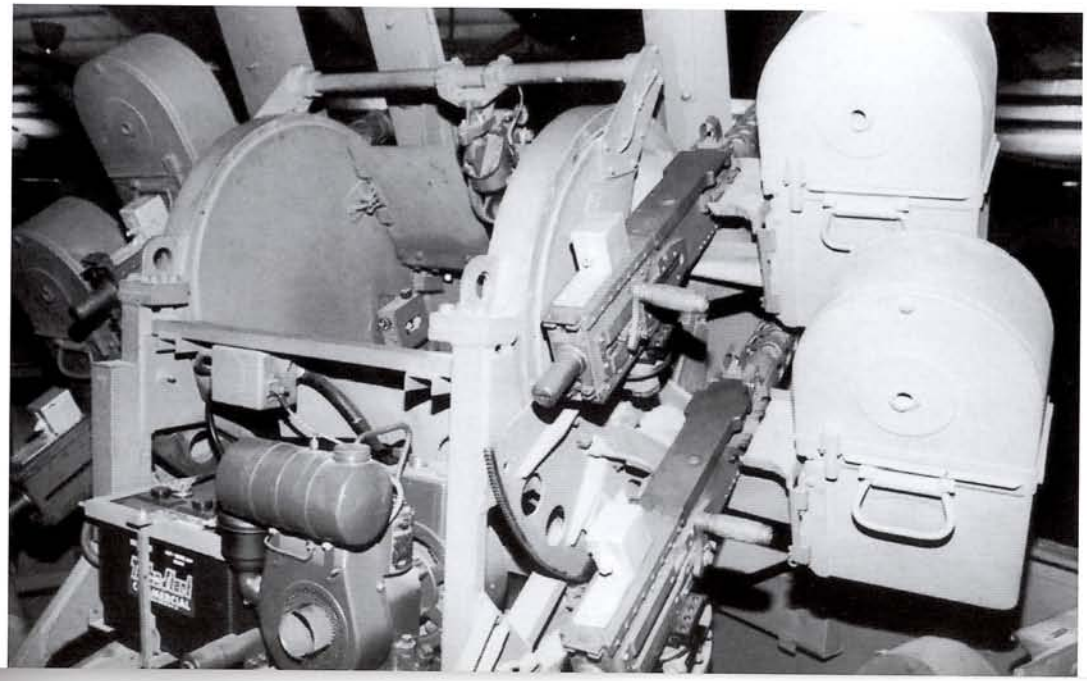
The four turret-mounted .50 caliber machine guns elevated through an arc from +90° through -10°. The gunner's position in this M45D turret was protected by a round armor plate. Two small folding flaps were fitted atop this plate. (Green)

An electric motor and gasoline-powered generator are fitted at the M45D's rear. The turret was self-sufficient in power and did not work off the vehicle's power supply. A cylindrical gasoline tank for the generator is located at the right, while a postwar battery is used to power this restored M16.



The M16's four guns were normally fired in pairs, rather than all at one time, for reduced ammunition consumption. Each .50 caliber M2HB was capable of firing between 450 and 575 rounds per minute, although the normal firing rate was considerably lower. (Green)

Each gun was attached to a round mount, which was installed inside a circular housing. The gunner's seat, sight, and firing controls were all attached to this mount and they all revolved and elevated in unison. (Ward)

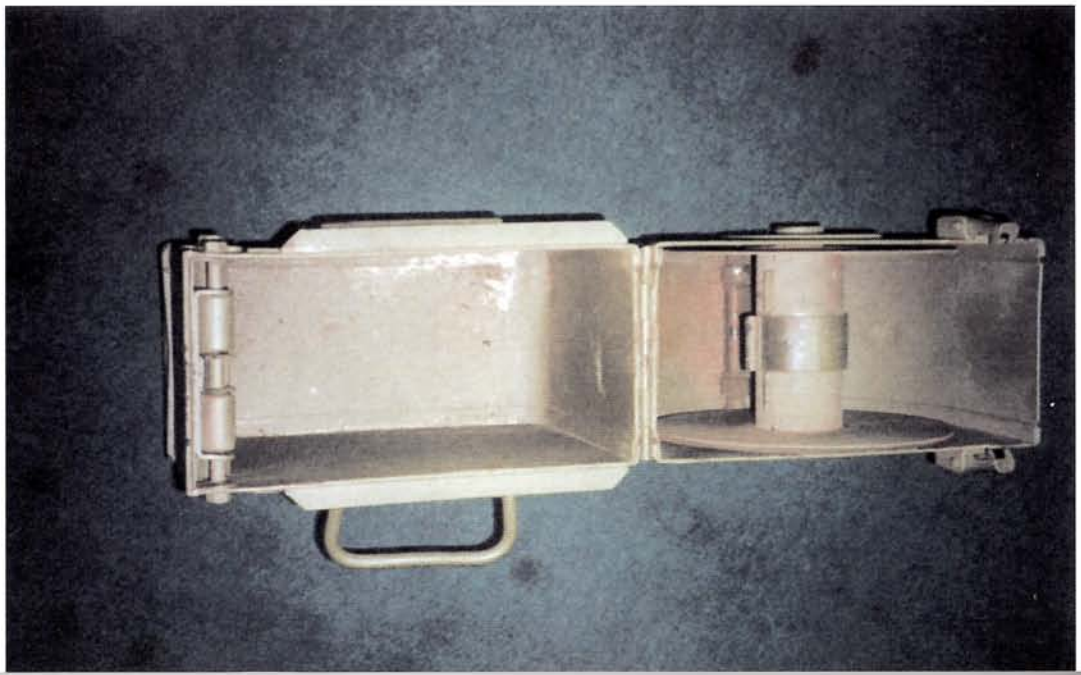


Part of the turret rotating motor and the collector ring were located underneath the gun mount. This mount swung around its full 360° arc in six seconds at maximum power. This traverse speed was enough for the M16 to engage most aircraft it faced during World War Two.

Ammunition for each .50 caliber M2HB was fed from a 200-round ammunition chest. This was fed through a slot approximately midway along the chest's side into the weapon's breech. The crank inserted into the chest's upper section was used to help load the weapon and was removed when this job was completed. (Ward)

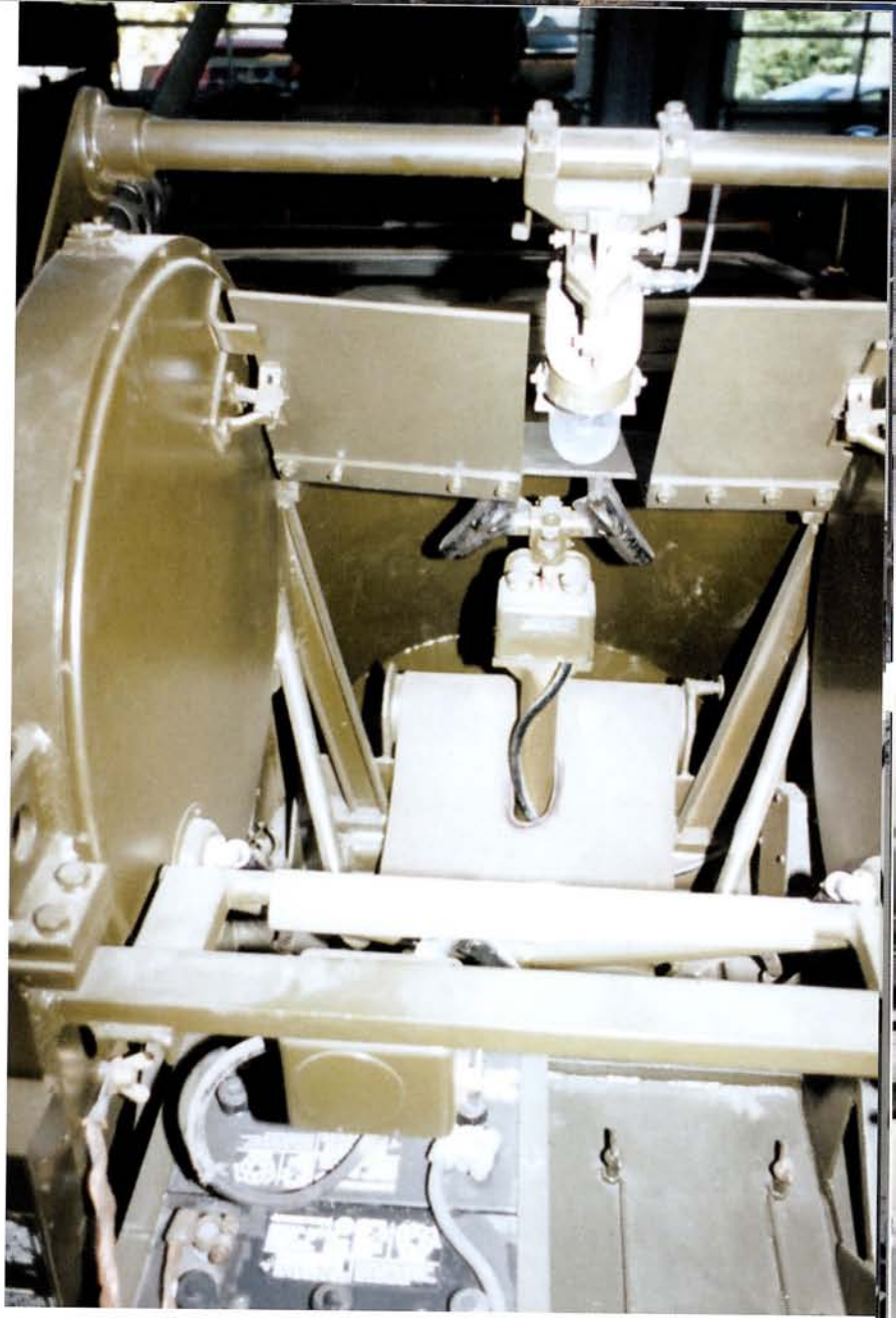
Each .50 caliber machine gun was mounted to a forged bracket, which was bolted onto the circular elevation mount. The attachment points were located under the receiver housing and the gun's aft end. Ammunition chests were fitted beside the two right weapons.

Simple metal ammunition chests hinged approximately halfway on one side supplied the M16's M2HB machine guns. Ammunition was threaded onto the revolving rod in the upper half and a crank (unseen here) was inserted to thread the machine gun belts into the chest. The last link of ammunition was then fed into the machine gun's breech and the weapon was set to fire. (Ward)

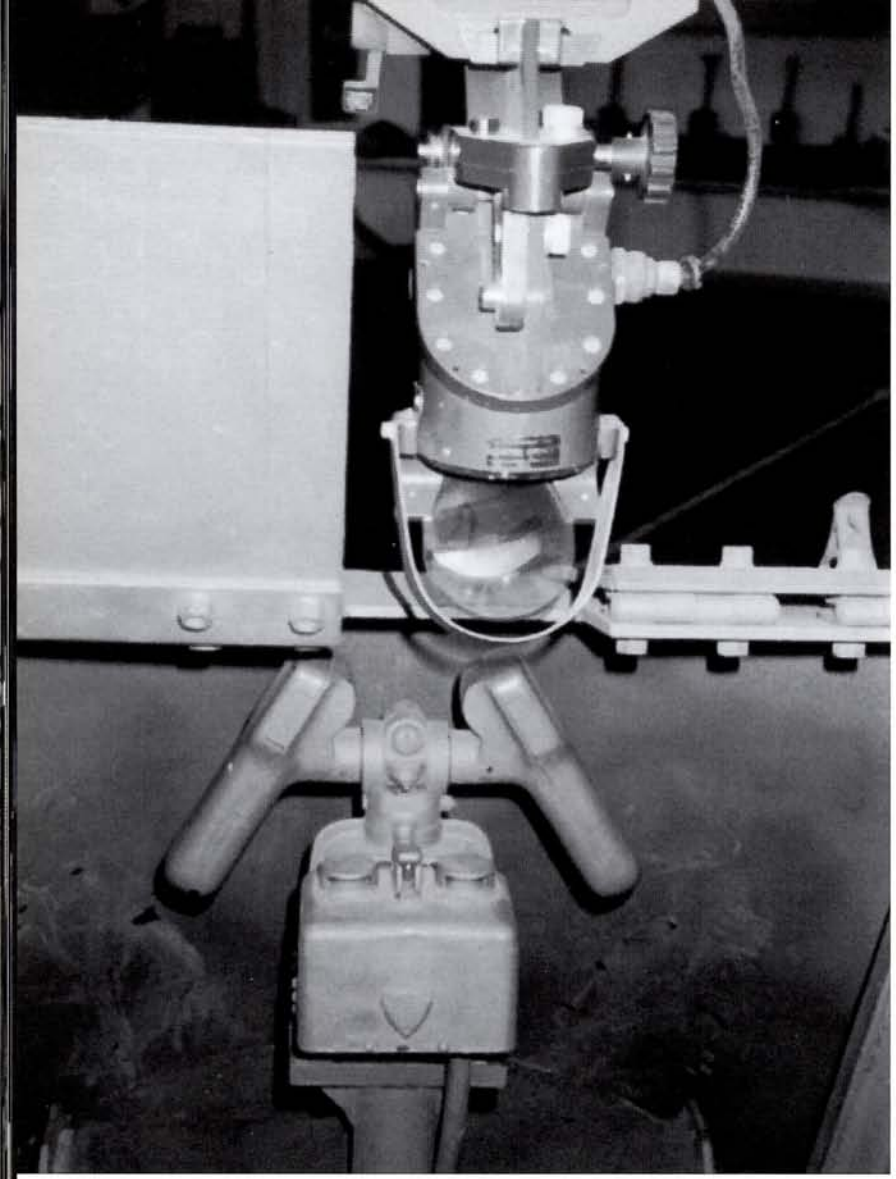


The ammunition chest was seated in a mount beside the M2HB's breech mechanism. The chest slid down between two sets of flanges on either side of the vertical surface. The bottom flange was closed off to prevent the chest from slipping down further than the required position. (Ward)

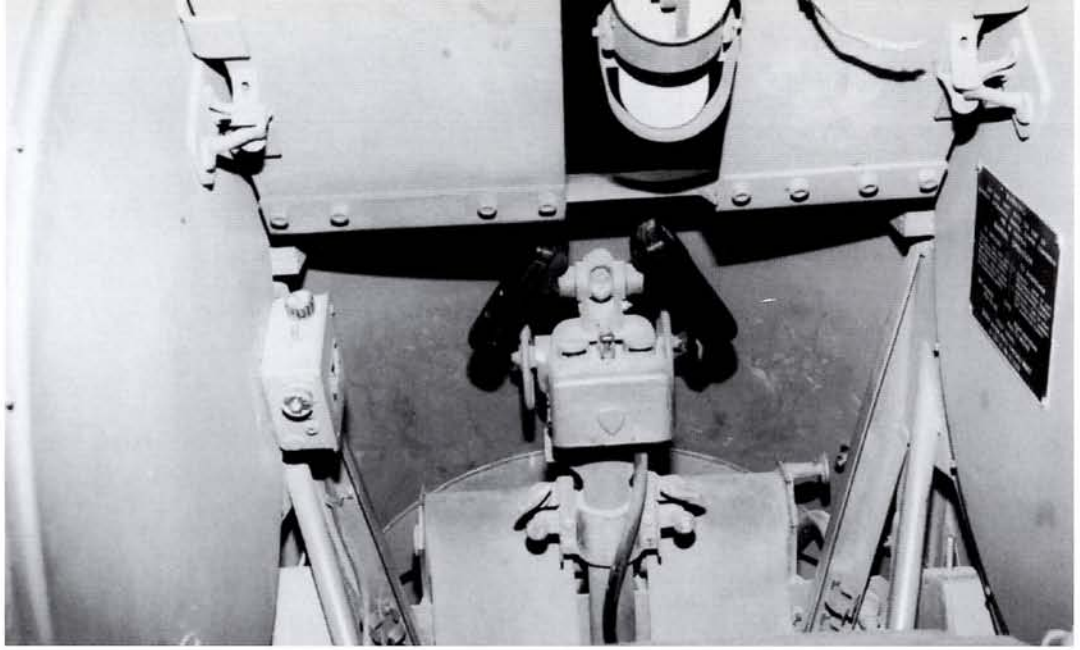
A 200-round ammunition chest is placed in the mount immediately right of the machine gun's breech. The ammunition belt was pulled out from the drum and inserted into the weapon's receiver. The machine gun charging handle immediately below and aft of the chest was pulled aft to charge the weapon for firing. (Ward)



The gunner's fabric-covered seat was installed between the left and right pairs of machine guns on the M45D turret. This seat was inclined at 45° and moved in unison with the weapons. Firing controls are mounted just above and forward of the seat bottom, while the gun sight is attached to the horizontal rod fitted between the inboard guns. (Green)

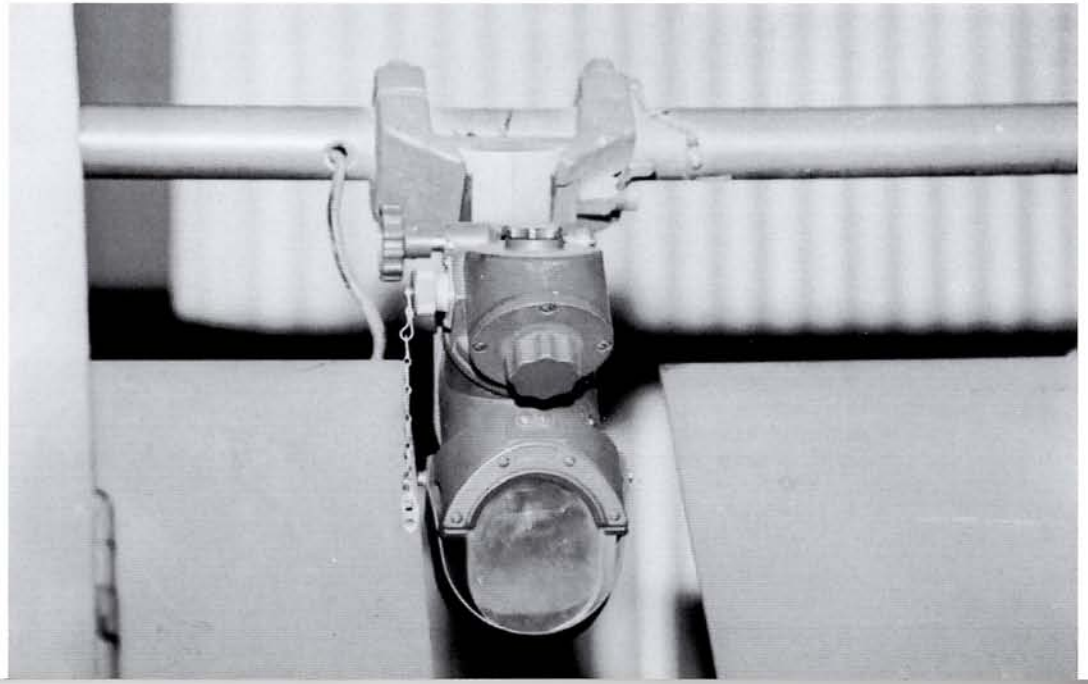


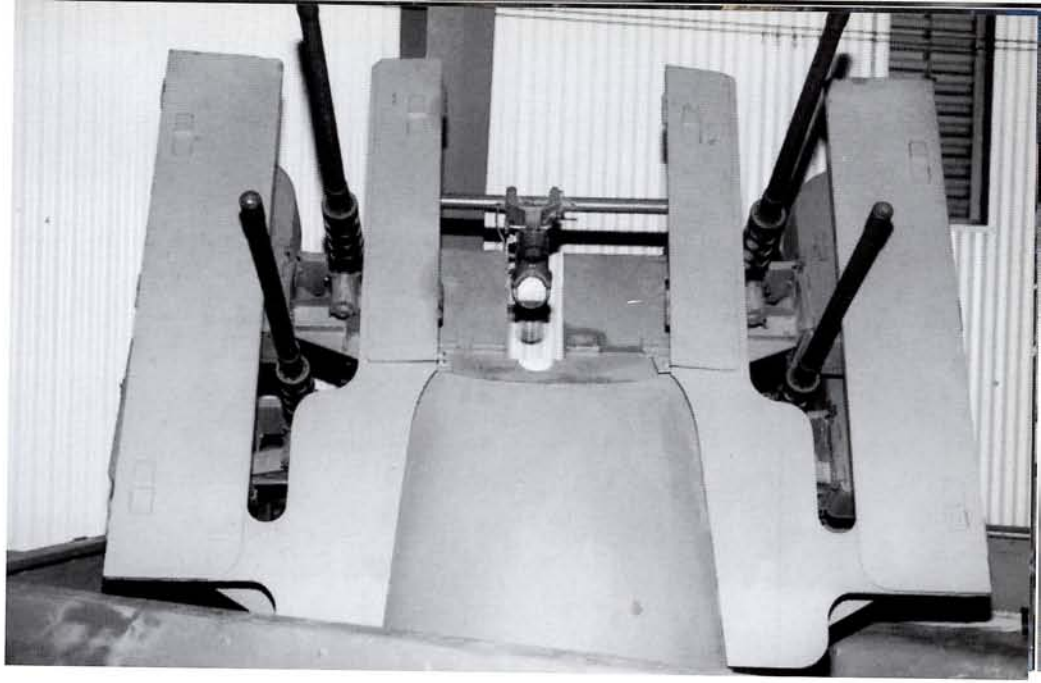
The M18 reflex sight was one of two gun sights used on the M16. This sight was mounted on the horizontal bar placed over the gunner's compartment. A reflex sight (also called a reflector sight) employed an angled piece of glass viewed by the gunner. Aiming marks were projected onto the glass based on pre-set target range and speed data. This allowed the gunner to aim his weapons at the target's projected position. Small folding armor flaps were mounted on the turret's front wall. They were raised to provide extra protection to the gunner or folded forward for improved vision. (Ward)



The gunner's black control handles allowed him to elevate and turn the M45D gun turret as needed. He turned the left handle to traverse the weapons a full 360˚, with a maximum traverse speed of 60˚ per second. The right handle elevated the guns from -10˚ to +90˚. (Ward)

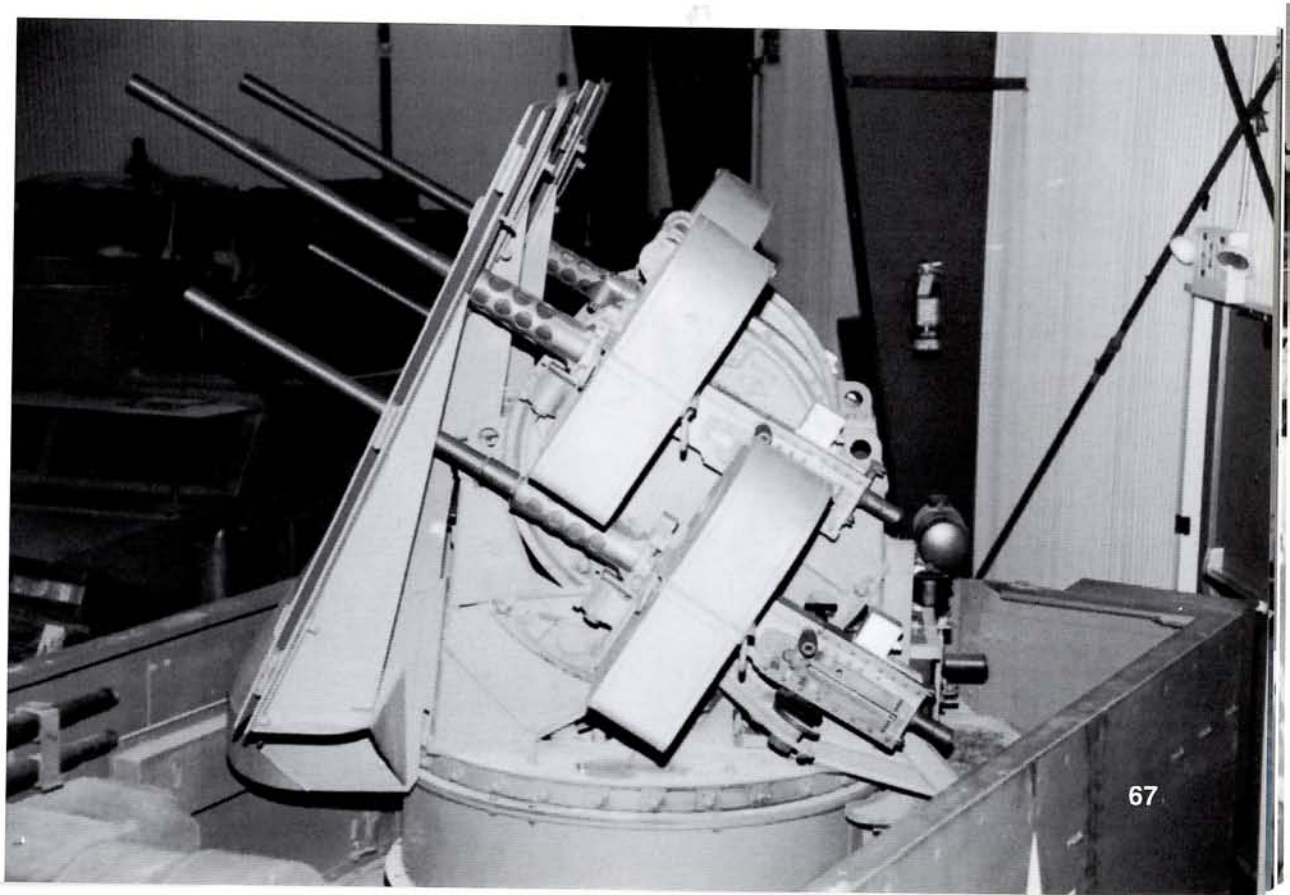
The Mk 9 illuminated sight was fitted to some M16s in place of the M18 reflex sight. The gunner viewed a lighted reticle that was projected onto the angled combining glass. This allowed for accurate aiming in all light conditions, including at night and in overcast weather conditions. (Ward)





(Above) M45F mounts installed on M16A1s (converted M3s) were fitted with 6-inch (15.2 CM) tall pedestal extensions. These allowed the machine guns to clear the sides of the vehicle, which lacked the M16's fold-down upper side panels. Side armor removed from this M16A1 being backdated to the M16 reveals this pedestal extension. The gun mount was fitted with wing armor, which provided the loaders with a small degree of protection from small arms fire and shrapnel.

(Above Right) Outboard wing armor panels are folded back on this M45F mount. Slots in the armor allowed the .50 caliber M2HB machine guns to depress or elevate as required. Additionally, field modifications added armor shields that differed noticeably in shape from this standard pattern. The M45F employed either the M18 reflex sight or the Mk 9 illuminated sight. (Ward)



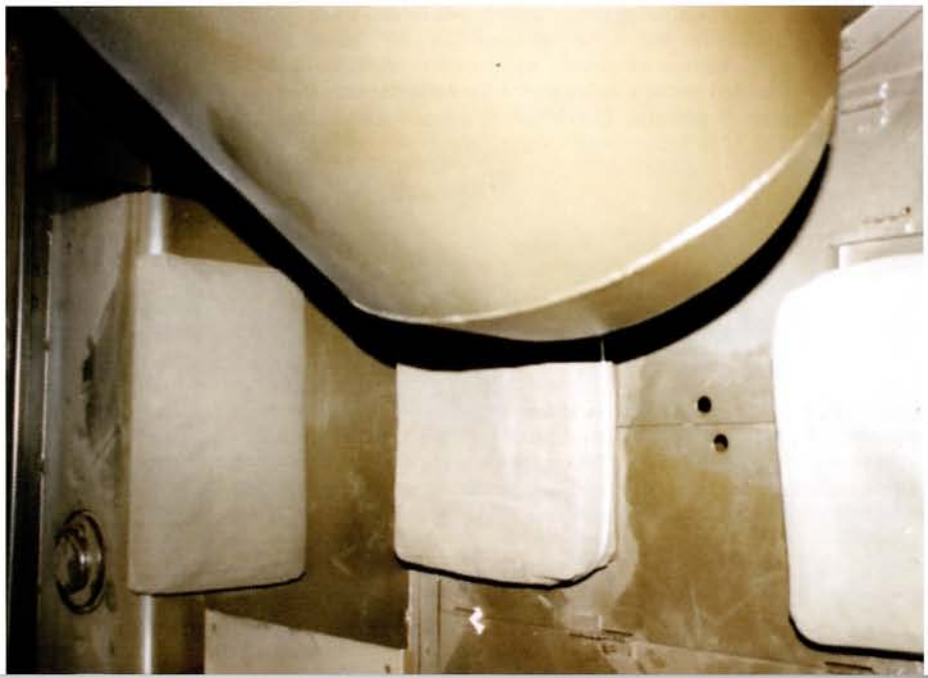
(Right) The armor shield was mounted to brackets on the front of the M45F turret. This shield turned with the turret, but did not elevate with the guns. The four M2HB machine guns were staggered to allow clearance for the 200-round ammunition chests. Each M2HB weighed 85 pounds (38.6 KG) and was 65.1 inches (165.4 CM) long. (Ward)

An antenna for the SCR-528 radio set was mounted above the M16's right side. A sheet metal ledge secured to the vehicle elevated the antenna's base above the troop compartment's upper edge. A canvas cover is placed over the radio case immediately beside the fuel tank.

(Above) Additional M2HB barrels were located in the troop compartment. Two barrels were stowed on the wall above the gasoline tank on both the left and right sides. The .50 caliber machine gun barrels glowed cherry red during sustained fire. The intense heat damaged the barrels, which greatly reduced the weapons' accuracy unless they were changed.

(Left) Additional ammunition storage was available in the troop compartment. This complemented the rack located at the front of this compartment. The M16 normally carried approximately 5000 rounds of .50 caliber ammunition, although this number was often exceeded in the field. (Green)

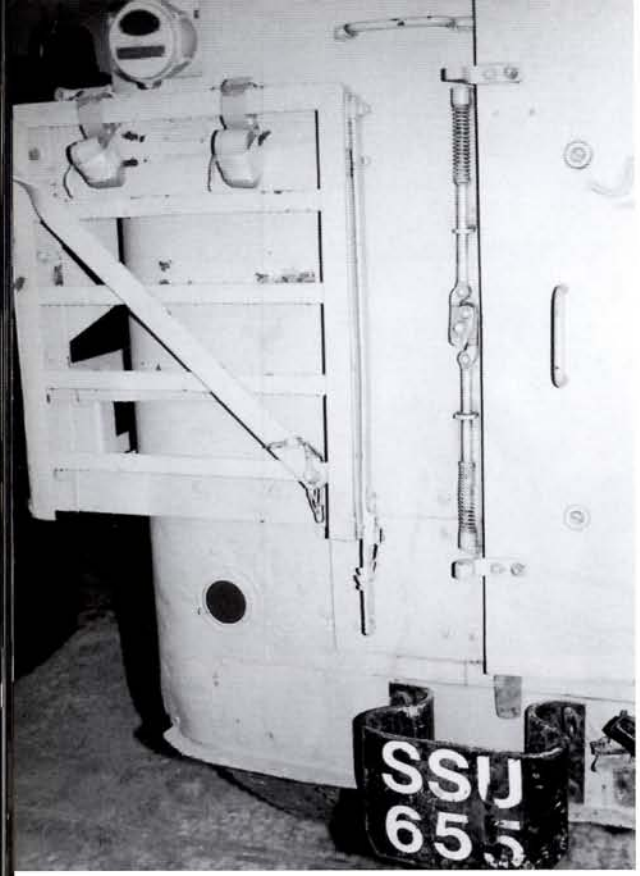
Small canvas seats for the gun crew were located beside the fuel tanks in the troop compartment. These seats were near the M45 turret's lower front edge. The M16 had a five-man crew, which consisted of the commander, driver, gunner, and two loaders. (Green)



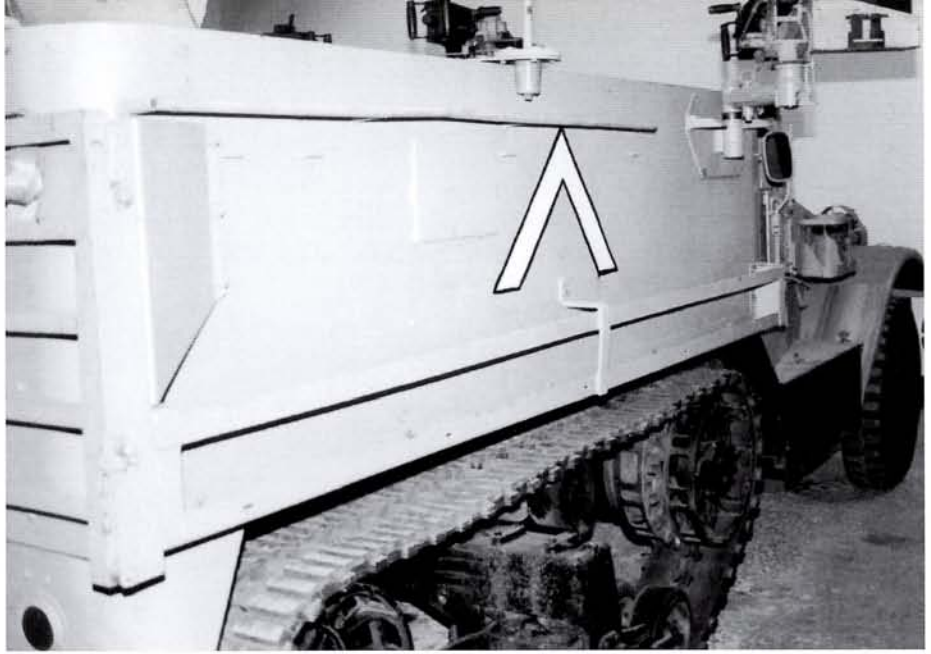
(Above) The most extensive post-World War Two user of the M3 series was the Israeli Defense Force (IDF). The IDF not only used the M3, but also the M5 and M9. This extensively modified M9 (SSU 655) features the flat fenders standard with this vehicle. The battery box runs the length of the running board, unlike the World War Two versions. IDF M3s were painted Israeli Sand Gray (approximately FS33440), which is the standard finish for Israeli armored vehicles. This M9 is part of Jacque Littlefield's collection of vintage armored vehicles. (Green)

(Above Right) The IDF replaced the M9's 143 HP International RED 450B gasoline engines with 212 HP General Motors 6V53 diesel engines during the 1970s. This resulted in the exhaust being redirected under the fenders on both sides. Additionally, the four armored louvers were removed from the front and replaced by a solid piece of armor. The black painted frame was common on modified vehicles. (Green)

(Right) M5/M9 series vehicles featured rounded rear corners, instead of the straight corners used by M2/M3 series vehicles. The side racks and rear folding storage rack common on later American models were retained on this Israeli M9. A black-edged white tactical marking is painted on the troop compartment's side. (Green)



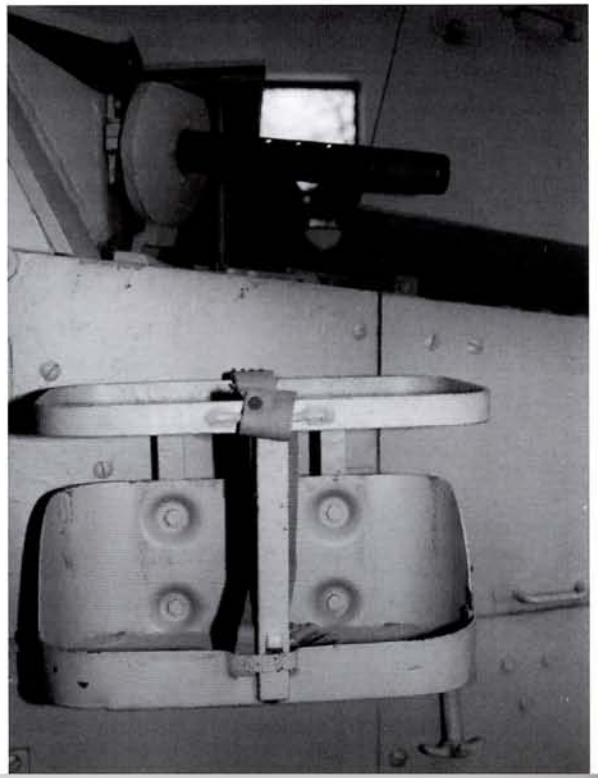
(Left) The IDF folding storage rack appears nearly identical to the US version. The rear door latching mechanism is located beside the door's left edge. Rear lights were moved from the lower to the upper rear hull and red circular reflectors mounted on the lower hull. (Green)

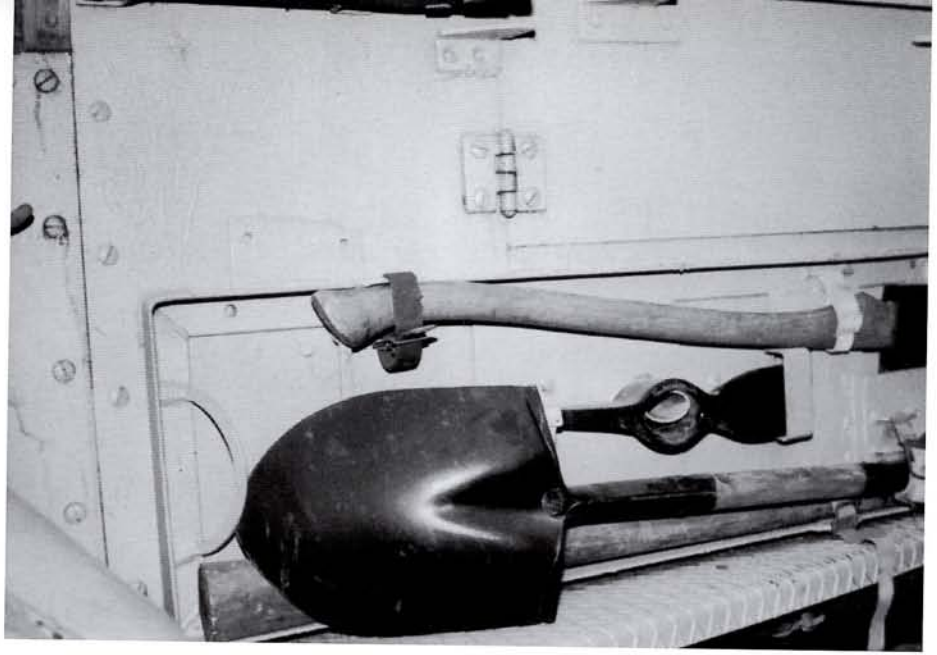


The right side was a mirror image of the left, aside from the reinforcing plates welded to it. The IDF fitted their half-tracks with a large number of machine guns. These weapons provided overwhelming firepower when assaulting a position. The extended battery box is located just behind the front wheel. (Green)

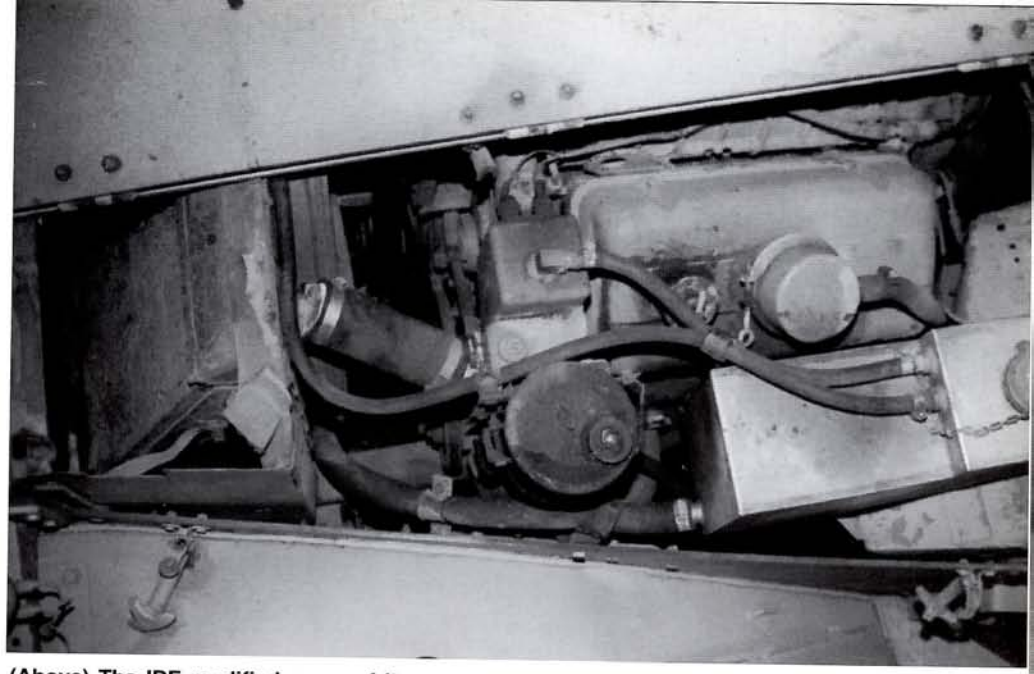
(Below) The IDF devised new heavy-duty 5-gallon (19 L) plastic jerry cans to replace the older World War Two-type metal containers. WATER is embossed on the can's side. Eventually, the US Army adopted a similar style container for its use. (Green)

The Israeli jerry can holder was modified from the US type, with additional support arms to hold the containers snugly in place. Three vertical supports – one forward and two aft – are welded to an upper band and the base. The jerry can fit within this band and base and was secured with canvas straps (removed here). A .30 caliber (7.62MM) Browning M1919A4 machine gun is fitted to a ball mount just above this jerry can holder. (Green)



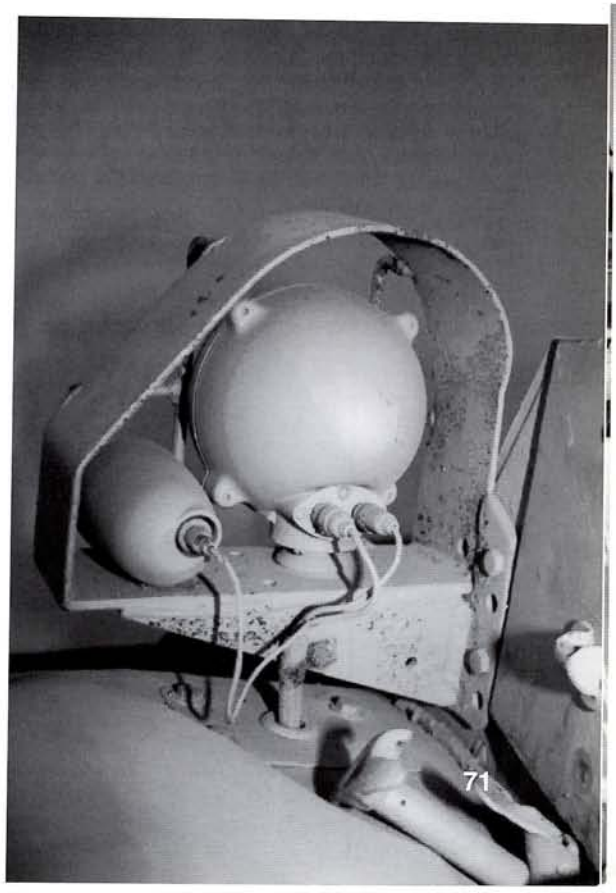


(Above) The longer battery box on IDF M9s resulted in a rearranged storage of tools. All the tools were repositioned under the driver's door. They were fitted into a frame assembly that was bolted onto the hull. An axe is mounted on the top, followed by a pickaxe head, shovel, and pickaxe handle. (Green)



(Above) The IDF modified many of its half-tracks during the mid-1970s. They fitted these vehicles with the 212 HP General Motors 6V53 diesel engine employed on the M113 Armored Personnel Carrier (APC). This powerplant was a six-cylinder, two cycle, liquid cooled engine, which had greater power than the original 143 HP RED 450B gasoline engine. (Green)

(Left) Israeli M9s were retrofitted with new headlight units. The main headlights were similar to those on the M113 APC. A smaller blackout light is located outboard of the main light. Additionally, new headlight mounts with brush guards were installed with the headlights. (Green)



(Right) Wires trail from the rear of the main and blackout headlights. They carried power from the M9's battery to the lamps. These lights have a different configuration from the earlier fender mounted or later removable headlights. (Green)

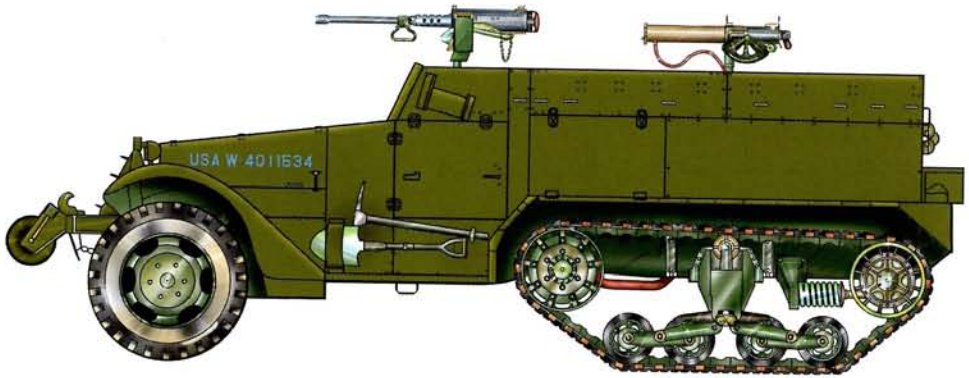
The left engine access panels are opened to reveal the 6V53 diesel engine. Its adoption by IDF half-tracks allowed for a greater degree of parts commonality between the M113 APCs and the half-track fleet. This helped reduce spare parts and eased battlefield maintenance. (Green)

The generator is mounted to the left of and immediately aft of the radiator. The large flexible air pipe runs from the carburetor to the air filter, which is mounted under the dashboard. Diesel fuel is less volatile than gasoline and the IDF appreciates this quality in its vehicles. (Green)

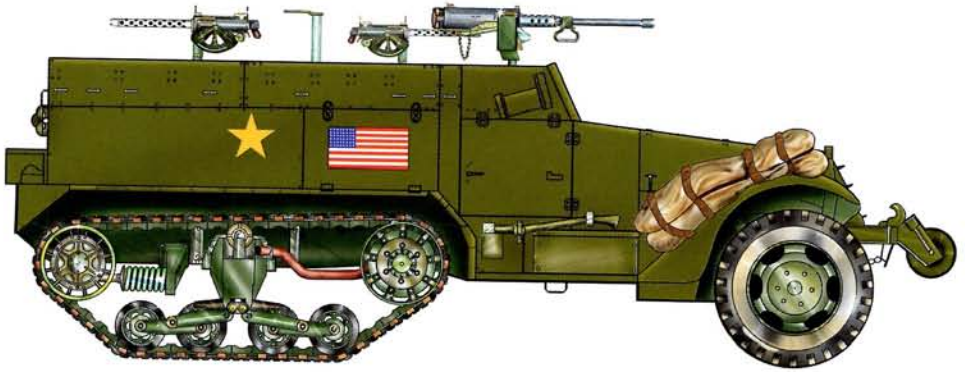
Re-engined IDF half-tracks had their exhausts vented out and under the fenders on both the left and right sides. The muffler was attached to the fender's rear undersurface. Mud thrown up from the wheel spattered the muffler of this preserved M9. (Green)

Front fenders of the re-engined half-tracks were modified with a welded on bulge. This allowed room for the muffler to fit under the fender. The bulge installation was a rather rough weld job, since the IDF was more concerned with function over appearance. (Green)

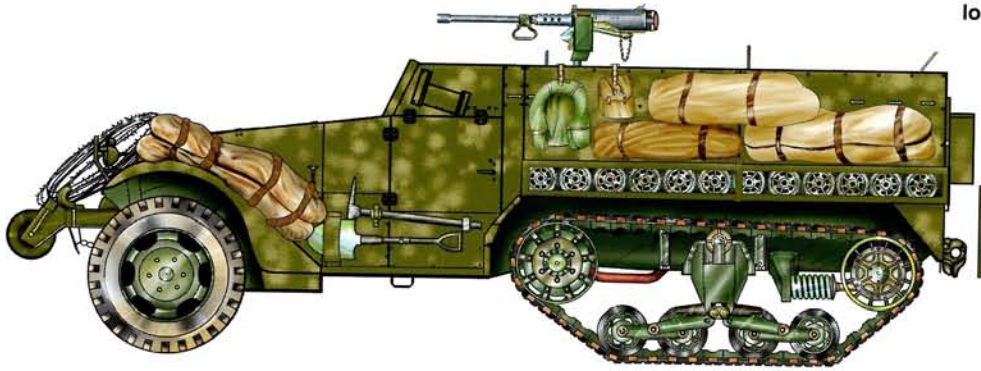
This M2 (U.S.A. W-4011534) was assigned to the 2nd Tank Battalion, 1st Marine Brigade (Provisional) during the US occupation of Iceland in 1941. The M2 has US Army markings, as the US Marine Corps obtained their vehicles through Army supply depots during this time period. This vehicle is overall Olive Drab (FS34087), with a Blue Drab (approximately FS35250) serial number.



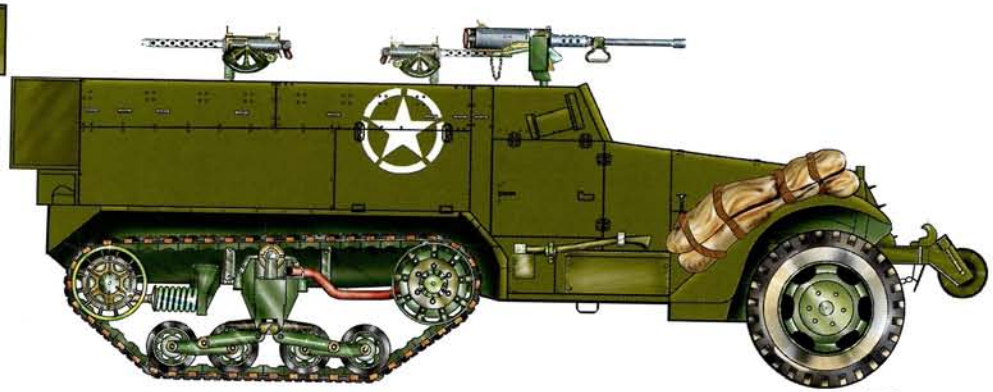
The 13th Armored Regiment, 1st Armored Division operated this M2 at Youks les Bains airfield, Algeria in mid-November of 1942. The American flag on the side bin helped deter the French from opening fire on US troops during the invasion of French North Africa (Operation TORCH) on 8 November 1942. The side star was Orange-Yellow (FS33538), since that color was considered less conspicuous than White.

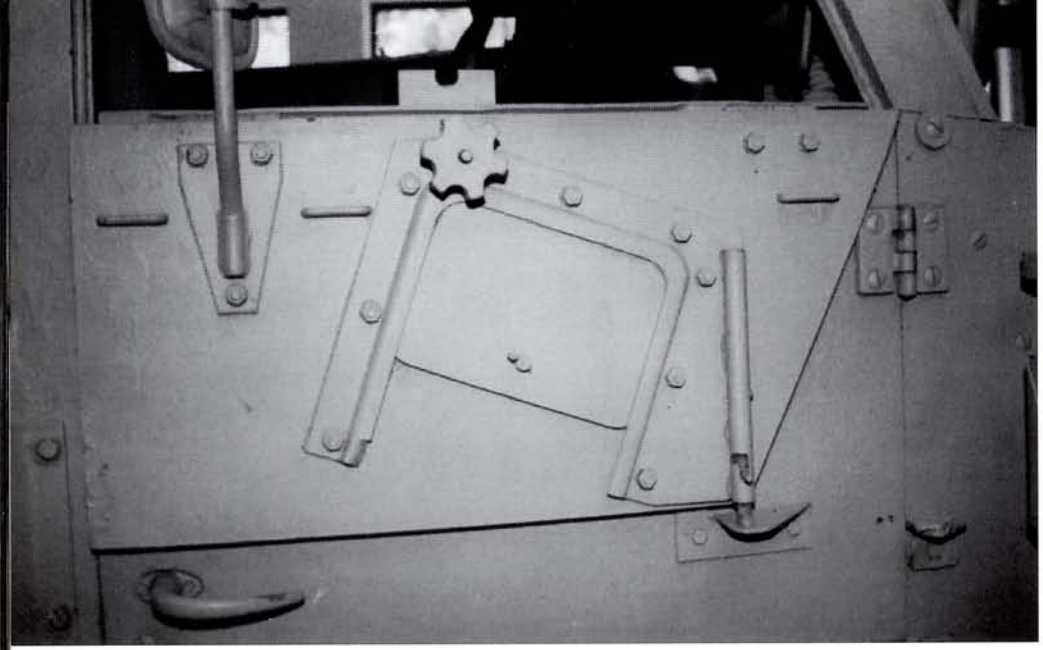


This M3 of the 1st Armored Regiment, 1st Armored Division operated near Sidi-bou-Zid, Tunisia in mid-February of 1943. Its crew gave it an improvised camouflage of dried mud to help the vehicle better blend in with the lighter colored terrain.

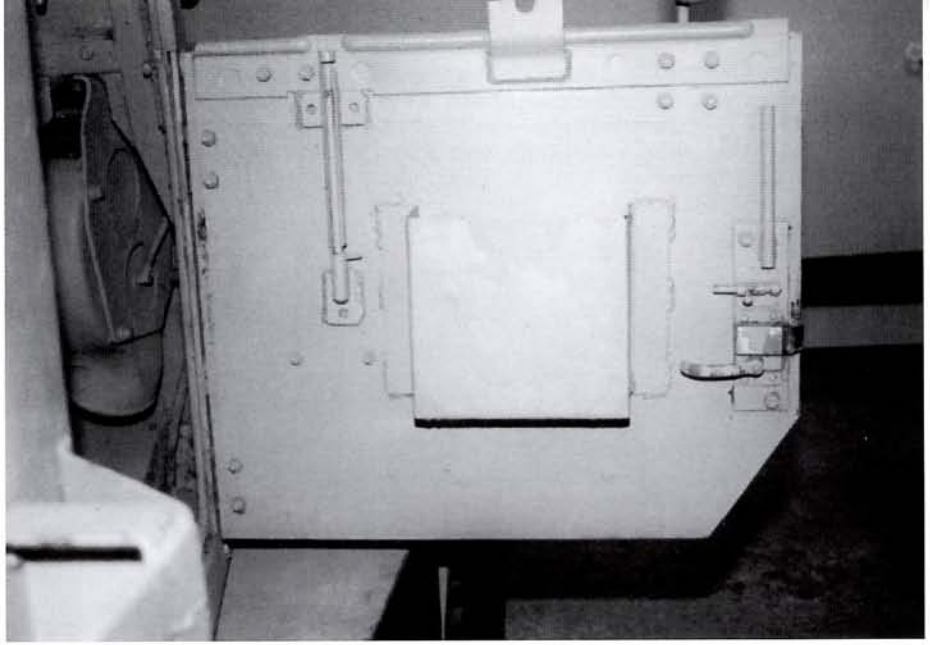


Company A, 645th Tank Destroyer Battalion, 5th Army employed this M2 in Italy in late 1943. This unit was equipped with M10 tank destroyers at the time and used the M2s in the support role. In the Spring of 1943, a White circle was placed around the star to aid long-range identification of US vehicles.



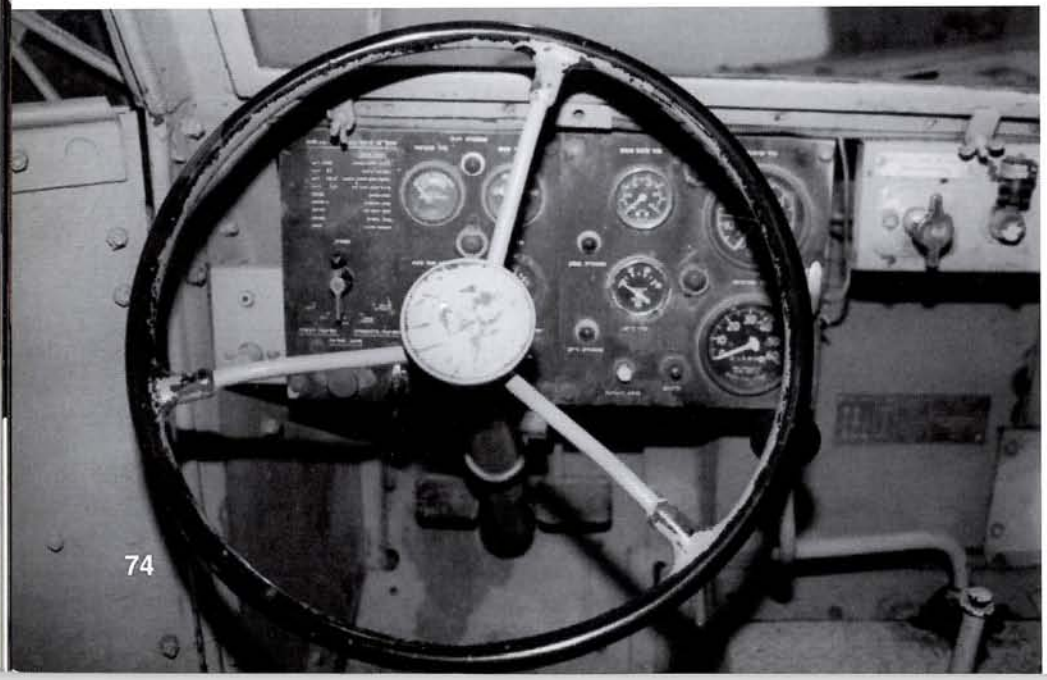


The IDF slightly modified the side door flaps with larger vision port covers. The rear view mirror was affixed to a bracket on the aft door section. This mirror also served as a handle to lift the flap into the upright/closed position. (Green)

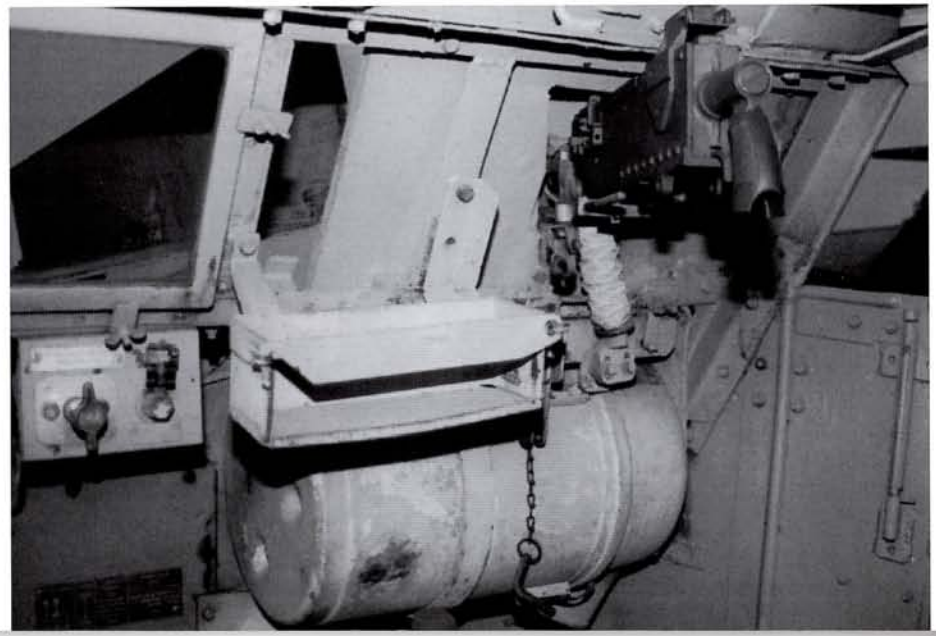


The passenger's door inner surfaces were also slightly modified when compared to the original vehicle's doors. A map holder was welded to the center of the door. Inner surfaces of IDF half-tracks were painted Israeli Sand Gray, just like the outer surfaces. (Green)

The IDF M9 driver's compartment was similar to the M3, but featured an upgraded control panel. Instruments were rearranged on a panel directly in front of the driver. These vehicles originally had these instruments placed across most of the panel. (Green)

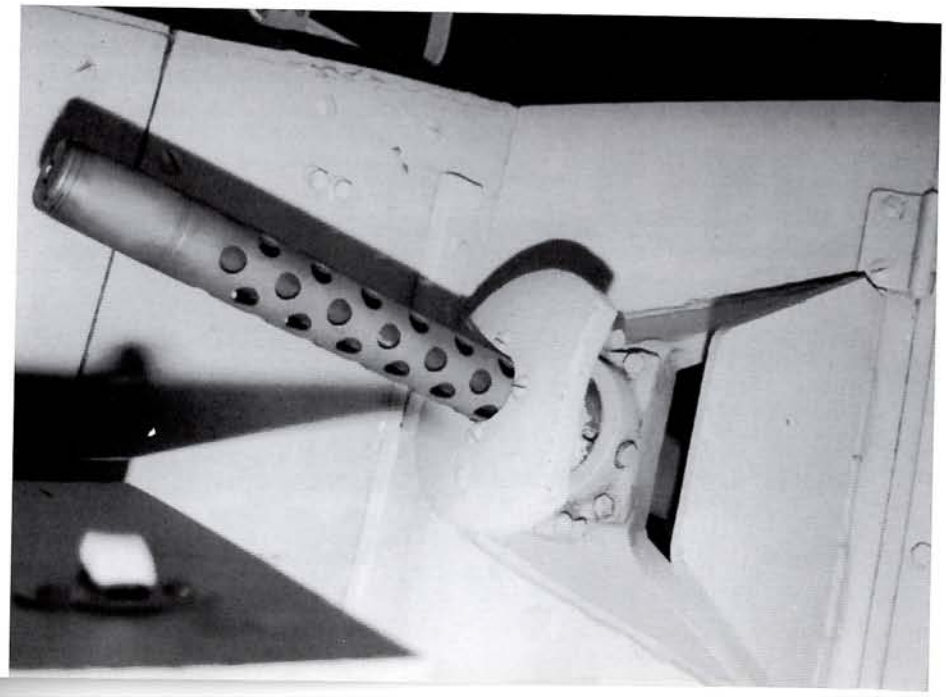


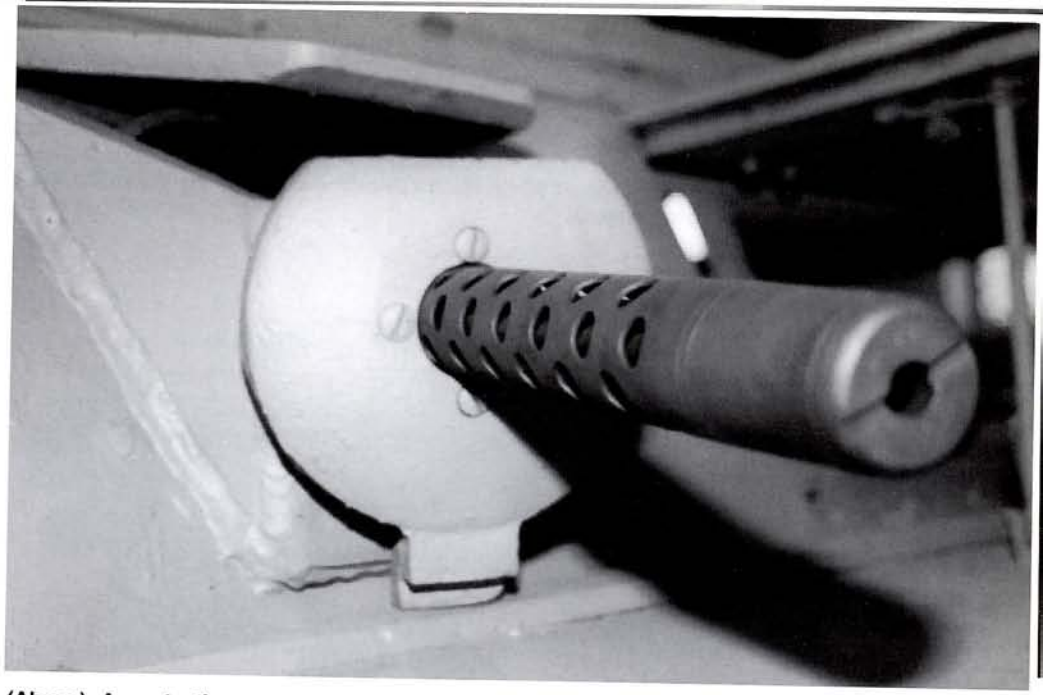
The passenger's side had the biggest change in the driver's compartment arrangements on the IDF M9. Approximately one-third of the armored panel was fixed in place. A .30 caliber (7.62MM) M1919A4 machine gun was fitted in a ball and socket mount in this area. The ammunition box fit into a tray that was mounted to the left of this weapon. The circular air filter beneath the machine gun was fed by air from the flexible hose that ran off the engine. (Green)



The M1919A4 was mounted in a sleeve similar to those found in tanks with hull-mounted machine guns. The small flexible stabilizing sleeve under the barrel stopped the gun from swinging around. (Green)

A folding flap atop the machine gun housing allowed access to the ball and socket mount. The side armor panels approximately matched the angle of the upper plate's sides. (Green)

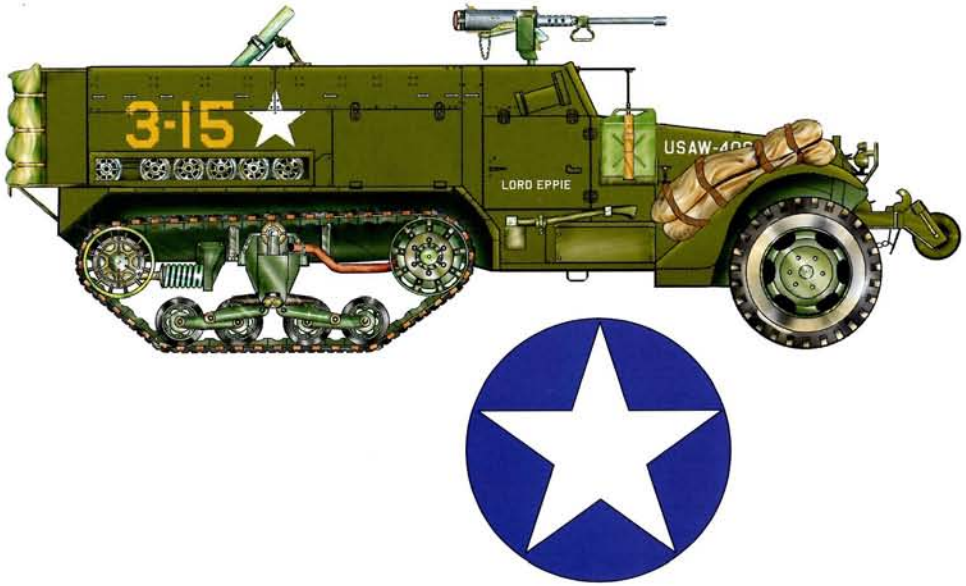




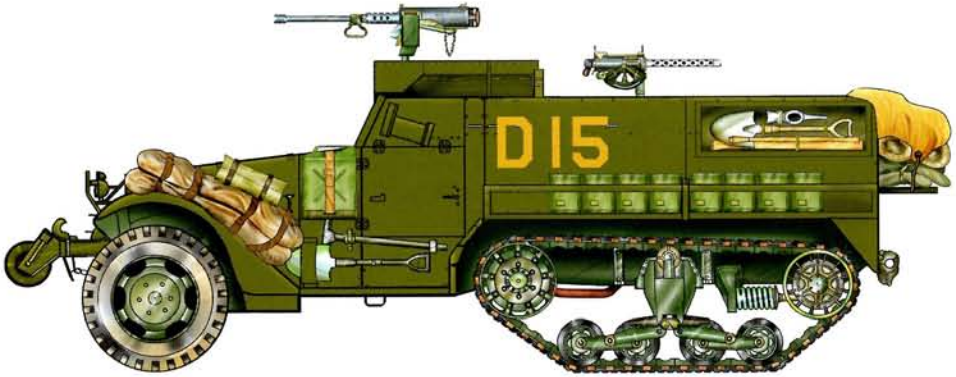
(Above) A protective armor shield was fitted to the gun barrel. Immediately aft of this shield were the armored sides that enclosed the mount. The armor plate's upper section was cut down on Israeli half-tracks. This allowed the gunner to see outside the driver's compartment and aim his weapon. (Green)

(Right) The IDF half-tracks' interior layout was both simple and functional. Its hallmark was easy access to weapons and ammunition along with numerous mounting points for a variety of machine guns. This M9 is armed with three .50 caliber (12.7MM) Browning M2HB machine guns. One weapon is mounted on a pedestal at the front of the troop compartment, while the other two guns are fitted to the compartment's sides. (Green)

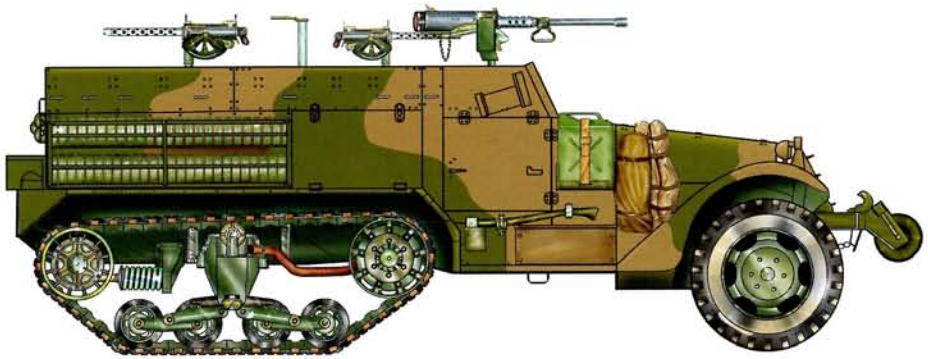
LORD EPPIE was an M4 mortar carrier (3-15/U.S.A.W-4061237 S) assigned to the 41st Armored Infantry Regiment, 2nd Armored Division in England in the Spring of 1944, just prior to D-Day. The 81MM M1 mortar was modified to fire forward, as opposed to the normal rearward-firing configuration. A White star is painted on an Insignia Blue (FS35042) disc atop the engine compartment.



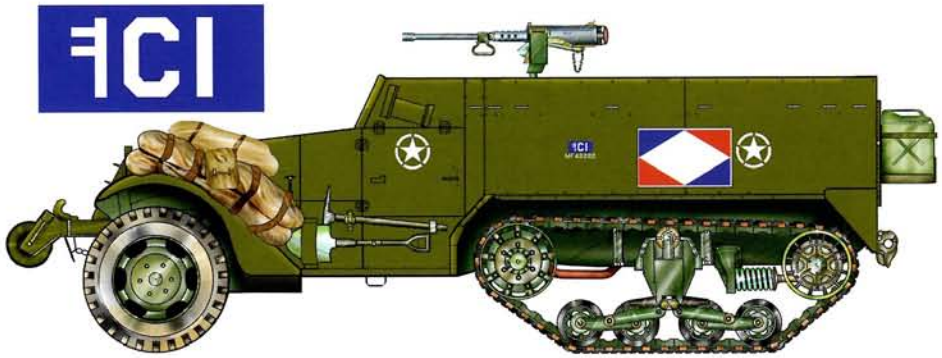
This M3A1 (D15) of Company D, 36th Armored Infantry Regiment, 3rd Armored Division operated near Meaux, France in late August of 1944. Both the 2nd and 3rd Armored Divisions marked many of their vehicles with Orange-Yellow company numbers and radio call signs on the sides.



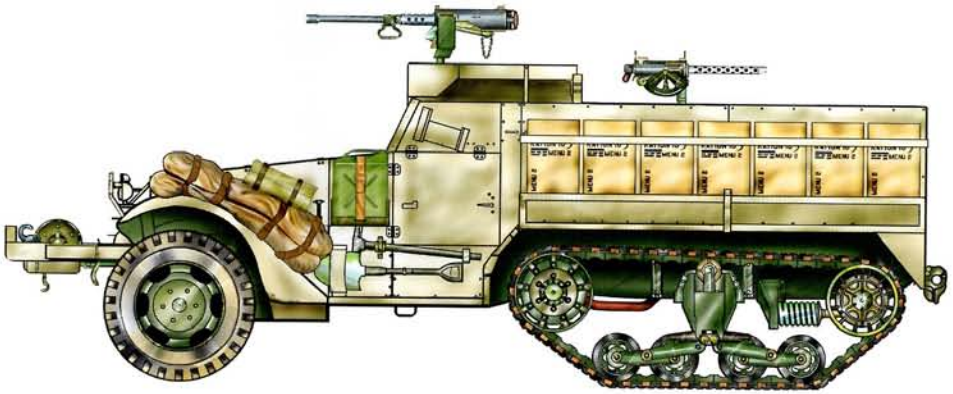
This M2 was assigned to support the 141st Infantry Regiment, 36th Infantry Division during Operation ANVIL (DRAGOON), the Allied invasion of southern France on 15 August 1944. Earth Yellow (approximately FS30257) was painted over the basic Olive Drab scheme. An improvised mine rack was added to the side.



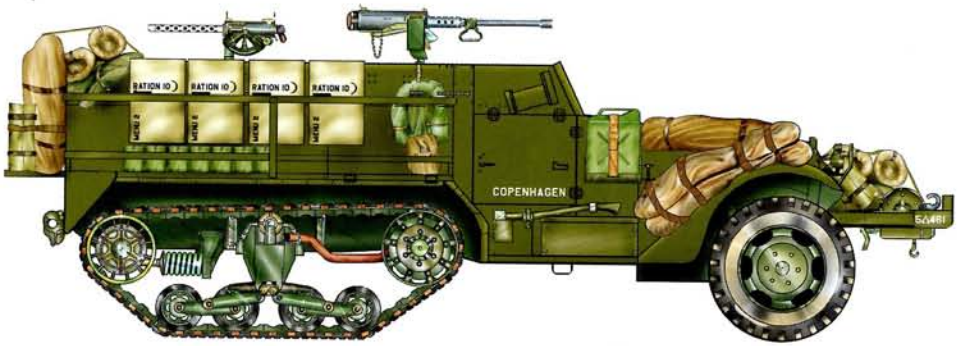
The 2nd Squadron, 2nd Cuirassiers, French 1st Armored Division operated this M3 (MF42222) at Baranges, France in October of 1944. The blue background to the insignia above the serial number indicated the Division, while the C identified the Regiment. The White vertical bar on the left designated the Squadron.



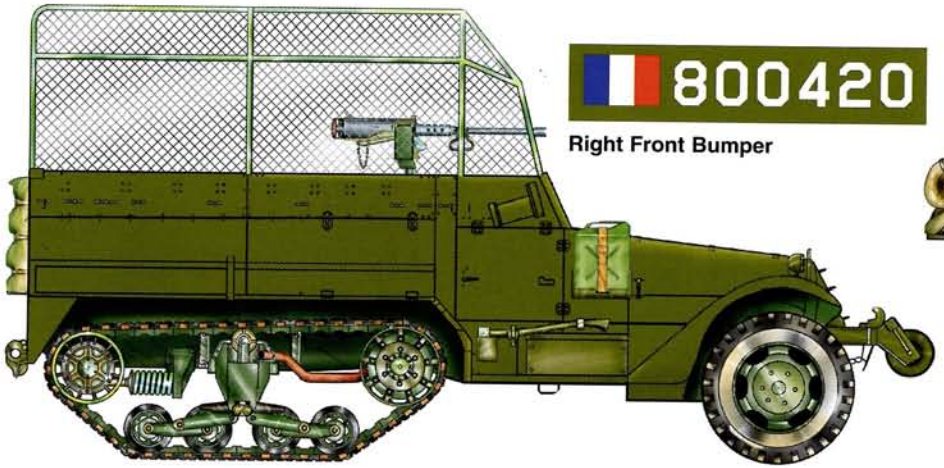
This camouflaged M3A1 assigned to the 44th Armored Infantry Regiment, 6th Armored Division operated near Mageret, Belgium late in the 'Battle of the Bulge' in January of 1945. A coat of whitewash helped the M3A1 blend in against the snowy background. It has been fitted with an additional storage rack on the side to hold oversized supplies, including the attached K-ration boxes.



COPENHAGEN was an M3 of the 46th Armored Infantry Regiment (AIR), 5th Armored Division near Wittenmoor, Germany in April of 1945. It was fitted with an additional storage rail on the side to carry K-ration boxes and other large, bulky items. The White code on the right front bumper indicated this M3 was the 1st vehicle of the 46th AIR, 5th Armored Division.

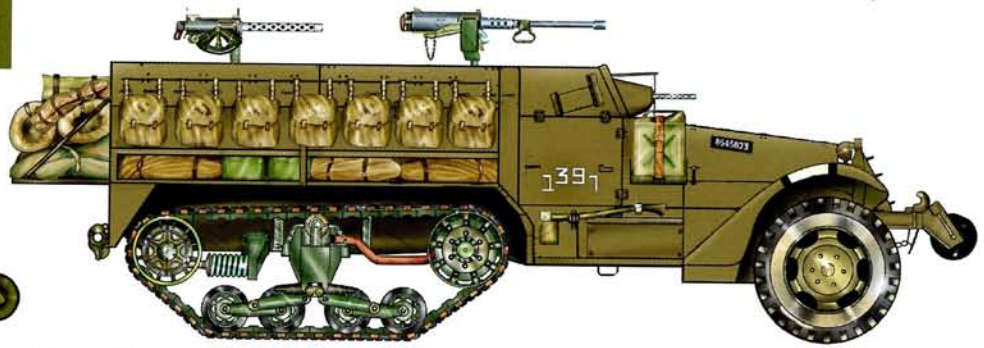


An elaborate anti-grenade cage was fitted to this French M3 (800420) in French Indochina during the early 1950s. This cage protected the crew and vehicle from a close-in assault. That was a particular hazard in Indochina, due to the proximity of dense jungle foliage close to the roads.



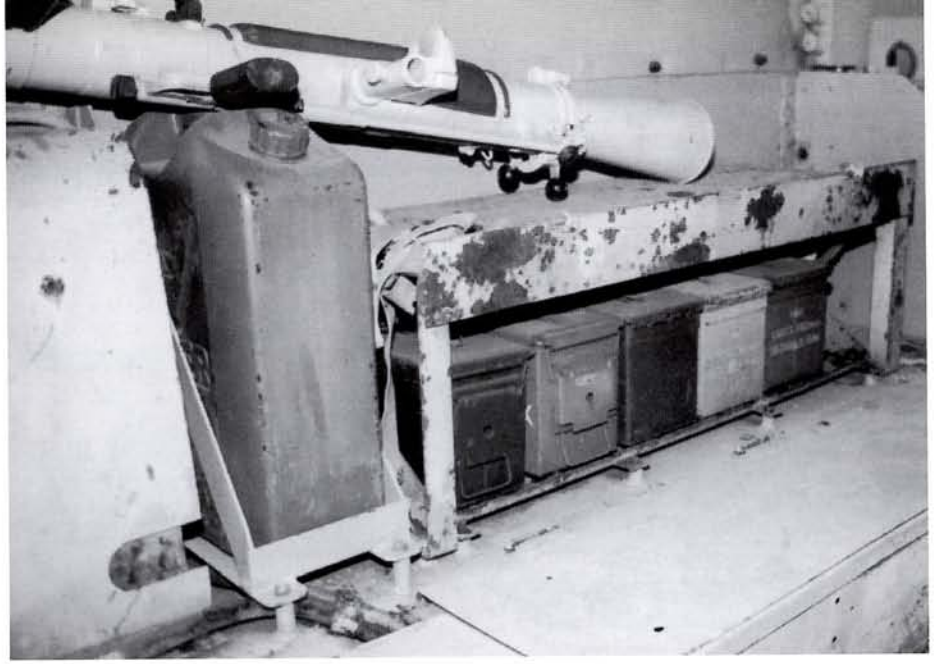
Right Front Bumper

This Israeli Defense Force (IDF) M3 (854582) was attached to Major General Ariel Sharon's *Ugdat* (Division) that crossed the Suez Canal on 18 October 1973, during the Yom Kippur War. The vehicle is painted overall Israeli Sand-Gray (approximately FS33440), with White and Black recognition markings on the hood and fenders and White side markings.



The Hebrew character *tsadi* at the end of this registration number is the first letter of *Zahal*, the Hebrew abbreviation of the Israeli Defense Force.

A pedestal-mounted .50 caliber M2HB is located directly behind the driver's compartment. This mount was installed on most IDF half-tracks. The Israelis greatly appreciated the M2HB for its reliability, range, and firepower. (Green)



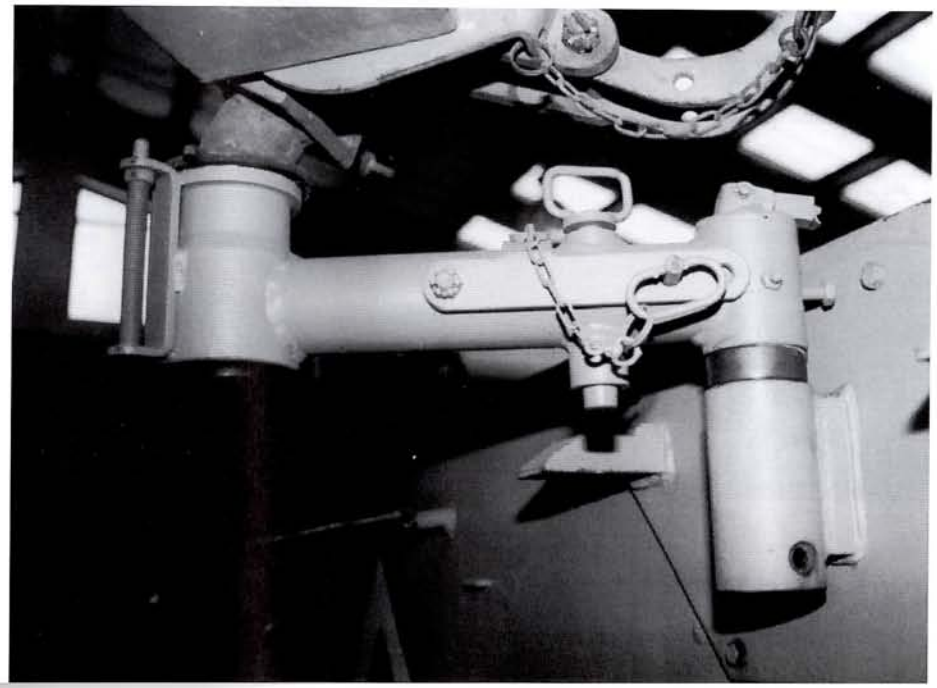
The Israelis replaced the M9's left storage bin with crew seating and ammunition storage. Five ammunition boxes are fitted under the bench, while a large plastic jerry can is stowed on its rack beside the bench. A Soviet RPG-7 anti-tank weapon lies across the bench and can. (Green)

A bench and two-place jerry can rack replaced the right storage bin on this M9. A 9MM Uzi submachine gun lies atop the bench. The tray below this bench is divided into nine segments for holding various equipment or supplies. (Green)

The M9 had its 30-gallon (114 L) fuel tanks located at the rear of the troop compartment. A spare .50 caliber barrel is loaded on a storage rack above the right tank. A .30 caliber machine gun is mounted to the rear wall. Minor fitting modifications were made to the rear access door. (Green)

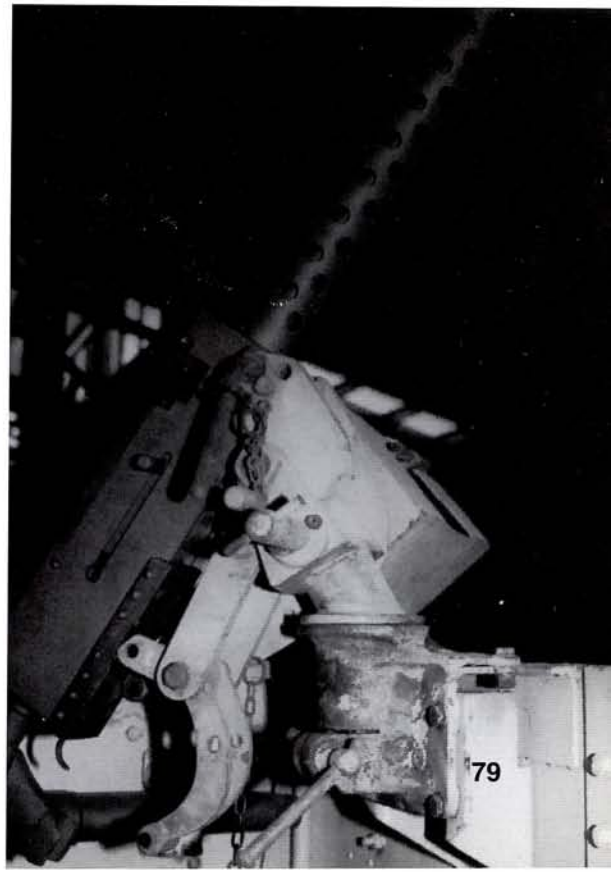
A second 30-gallon fuel tank is mounted on the left side, across from the right tank. Seat backs and cushions were provided for two troops on either side, although these are not fitted on this vehicle. Additional storage areas are located underneath the seat area and floor. (Green)

This swivel mount fit into a holder mounted on the vehicle's side wall. This allowed the mount to pivot while the pintle swiveled and the machine gun could be elevated or depressed. It gave the mount great flexibility and movement. (Green)



(Above) One of the hallmarks of IDF half-tracks was the wide variety of armament they carried. A .50 caliber M2HB is fitted to this IDF-designed unique swivel mount on the troop compartment's right side. This mount was used on nearly all its combat vehicles. (Green)

(Right) A .30 caliber M1919A4 machine gun is mounted on the rear of the troop compartment. This mount was fairly similar to the original American mount, with slight modifications made by the Israelis. The IDF's practice of mounting additional machine guns on their personnel carriers continues today on their US-supplied M113s.



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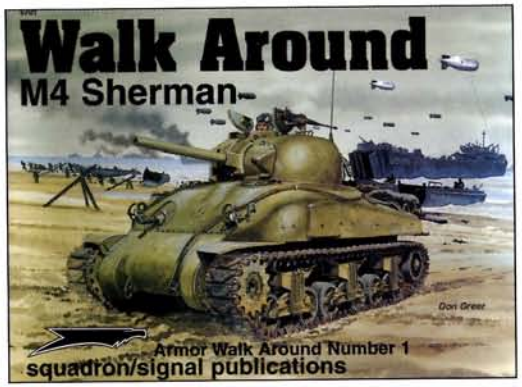
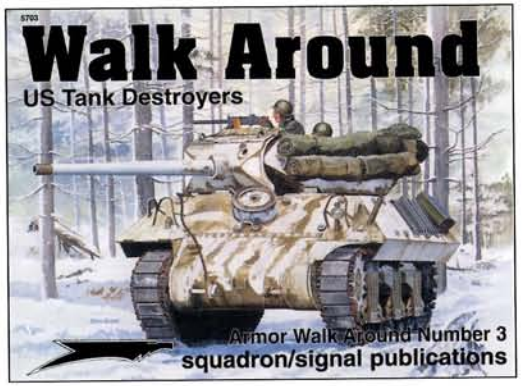
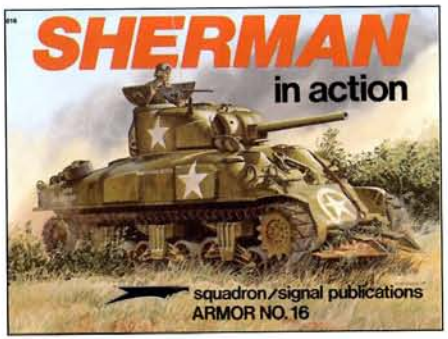


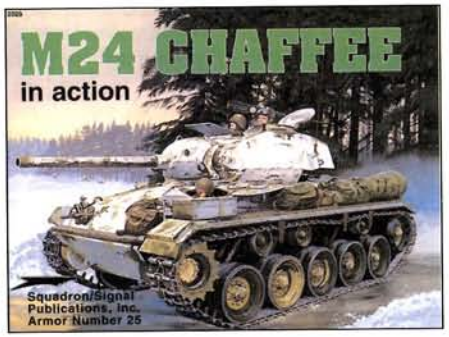
5701 M4 Sherman Walk Around



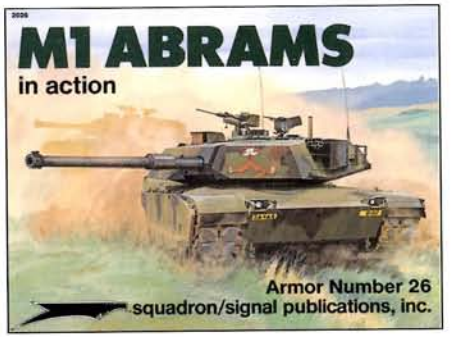
5703 US Tank Destroyers Walk Around



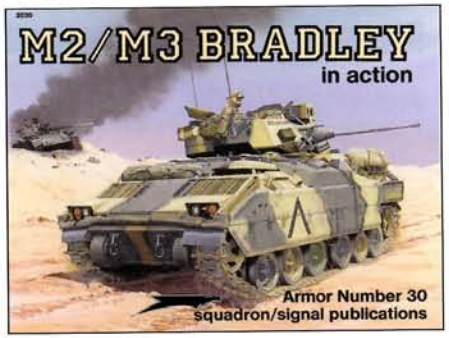
2016 Sherman



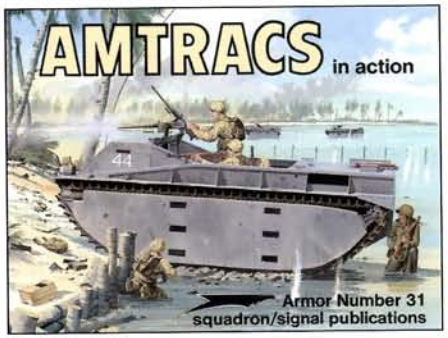
2025 M24 Chaffee



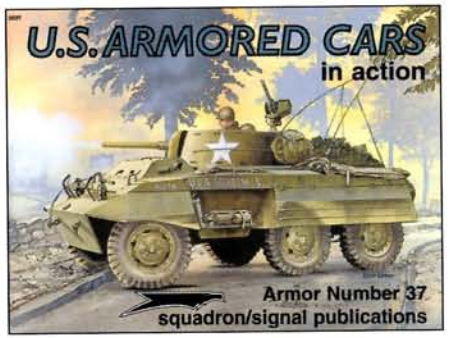
2026 M1 Abrams



2030 M2/M3 Bradley



2031 Amtracs



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